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BUFFALO MEDICAL JOURNAL

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Number 1

ORIGINAL ARTICLES

The right is reserved to decline papers not dealing with practical medical and surgical subjects, and such as might offend or fail to interest readers. Contributors are solely responsible for opinions, methods of expression and revision of proof.

Renal Pain,—Modern Methods of Diagnosis and Their Interpretation.

ERNEST M. WATSON, A. M., M. D., Buffalo.

Renal Pain as a presenting symptom is encountered fairly frequently in most surgical lesions of the kidney and ureter. However, not all pain in the region of the kidney has its origin along the urinary tract and with this symptom disease of the appendix, gall bladder, hepatic and splenic flexures of the colon, retro-peritoneal growths and an occasional psoas abscess have to be borne in mind. Along the urinary tract it is possible to localize lesions with great accuracy and at the present time its elimination as a source of trouble is most desirable in all cases where the exact diagnosis is in doubt. Modern methods of examination with functional studies have made it possible to consider this system in situ with almost as much knowledge as if we had it removed from the body and in a specimen jar.

(1). The routine of a kidney study should begin with a careful examination of the bladder urine in a centrifuged specimen from the third glass of the voided specimens. The determination of the presence or absence of albumen, pus, blood and infection are essential for the further intelligent interpretation of the findings.

(2). A plain X-ray of the kidneys, ureters and bladder should be the next step in the study of these cases. If these are negative or if suspicious shadows are seen and the diagnosis should be taken making stereoscopic plates. Small faint shadows often overlooked or considered unimportant in the

nosis has not been helped by this procedure a second series plain negatives will often assume a much greater significance when seen in the stereoscopic plates.

(3). After the X-rays a functional kidney test should be made preferably with phenol sulphone phthalein. This should be a total functional test of both kidneys. The dye should be injected intramuscularly and the specimens collected by voiding or by catheterization if there is residual urine present or if the patient is unable to void, at the end of an hour and ten minutes and two hours and ten minutes respectively. This will determine the total working capacity of both kidneys.

(4). Following this a cystoscopy and a ureteral catheterization is in order to determine the character of the urine and the functional capacity of each kidney separately. In this regard the color of the urine, the amount, the microscopic elements, with a study for infection and the urea content are necessary. The phthalein test for the determination of divided function should be given intra-venously the appearance time noted, the amount of urine excreted in a half hour and the amount of phthalein excreted. While the total phthalein may be normal due to a compensatory activity of the well kidney, the divided function in unilateral disease will reveal a reduced output on the affected side.

(5). If the foregoing studies are negative or if there is need of additional information pyelograms should be made of the renal pelvis and the plate should be made also to include the ureter on the suspected side. These are best made after an injection by gravity of a 15% solution of thorium as recommended by Burns (1). By this means anomalies, anatomical variations and even small calculi which fail to appear in the plain plates may be localized with surprising accuracy.

(6). A further procedure, the importance of which can be appreciated only after its demonstration in certain puzzling cases, is the passage of the wax-tipped catheter. By this means of employing the method suggested by Kelly (2) and later amplified by Burton Harris (3), Hinman (4) and Kirkendall (5) may be located small ureteral calculi too small to cast a shadow on X-ray examination. No case of hematuria, unilateral hydronephrosis or renal colic in which the cause is uncertain can be considered thoroughly worked up until one has the data revealed by the passage of the wax-tipped catheter. Oftentimes also a persistent unilateral pyelitis may be kept up by the presence of a small calculus partially obstructing the ureter but giving no other symptoms and failing to show on the X-ray plates.

Of the lesions in the upper urinary tract calculi occupy an extremely important place. These calculi may be in the parenchyma of the kidney, in the calyces, pelvis, along the ureter or they may have passed and be found in the bladder. Small calculi in the renal parenchyma, as a rule, cause fewer symptoms than those at any other site and often no symptoms are given. A parenchyma calculus can be diagnosed by only one means and that is the plain X-ray of the kidney. In the pelvis and calyces, however, calculi are wont to give considerable pain and frequently hematuria. Their presence there may be detected by the plain X-ray or if this is negative or only suspicious shadows are seen their density may be increased by injecting into the renal pelvis a 15% solution of thorium through a ureteral catheter and then allowing it to drain off. The calculi will absorb in this way a small amount of the thorium solution and upon subsequent X-ray examination their shadow will be intensified and outline clearly delineated. The location of election for ureteral calculi are for the most part confined to the three sites of anatomical narrowing of the ureter. These are first about the uretero-pelvic junction, second in the region of the pelvic portion where the ureter bends over the superior strait into the pelvis proper, and third about the junction of the ureter and bladder or in the intramural portion of the ureter. The diagnosis of calculus in the ureter may be accomplished by plain X-ray, and if this is negative by X-rays taken after the ureter has been injected with a solution of thorium to intensify the shadow. If these two procedures are negative the passage of a wax-tipped catheter is practically certain of establishing a diagnosis. In Geraghty's (6) experience there has been only one instance in which the wax-tip method failed to reveal the calculus when present. In this case there was a sacculatation of the ureter which held the calculus and allowed the wax-tip to pass by without receiving any scratch. In renal colic with a suggestive history of ureteral calculi the bladder also should be examined cystoscopically with considerable care for not infrequently the calculi pass spontaneously and may occasionally be found in the bladder.

Another group of kidney lesions in which the pain may be severe, at times constant at others intermittent in character and not uncommonly giving a real renal colic are those of infections (non-tubercular). In this class may be considered pyelitis, pyelo-nephritis and pyo-nephrosis. The simple pyelitis may readily be diagnosed by obtaining pus and organisms from the affected side through the ureteral catheter and in the functional studies finding no reduction in the output of phthalein. The border line between a simple pyelitis and

a pyelo-nephritis is not always easy to determine but a good working basis may be taken that when we begin to find a definite reduction in the phthalein excretion, we are safe in assuming that there has been a destruction of kidney substance. If the phthalein output begins to fall much below 20% for a half hour from one kidney after an intra-venous injection,—this finding with pus and organisms means a definite pyelo-nephritis. When the function falls still lower or is merely a trace or nothing in a half hour and there are large amounts of pus and bacteria present and when often times a spurt of creamy fluid can be seen through the cystoscope escaping from the ureter on the affected side before the introduction of the ureteral catheter we know that we are dealing with a frank pyo-nephrosis or pus kidney.

In tuberculous infections of the kidney it is rare that an individual consults a urologist early enough for him to diagnose a tuberculous pyelitis though such does happen occasionally. More often the condition has advanced to a pyelo-nephritis and frequently to a pyo-nephrosis. The diagnosis here is confirmed by the finding of the tubercle bacilli from the affected side and also in the bladder urine. Usually by the ordinary methods of staining no organisms but considerable quantities of pus are found and the demonstration of the acid-fast organisms is dependent in the vast majority of cases upon the diligence of the examiner in searching for them.

In the so-called idiopathic or essential hematuria the diagnosis is determined solely by a process of elimination. With negative pyelograms and plain X-rays and no scratches revealed after passing the wax-tipped catheter the diagnosis is practically assured. In addition with no infection present and a normal function there can be no other possibility for the presence of the hematuria except a papilloma in the pelvis of the kidney of which there are only a few reported cases in urological literature.

Tumors of the kidney, of which the most common is the hypernephroma, are diagnosed with difficulty except when they reach a size that is readily palpable. The X-ray findings may help in outlining a mass if it is of appreciable size and density. The pyelograms and urinary findings are not characteristic. The functional studies beyond showing a reduction due to the destruction of renal tissue are of little avail and the diagnosis in the early cases must be made by exclusion of other conditions and with the clinical history and picture.

Of the anomalies of the kidney and ureter that give pain

as the most characteristic symptom may be mentioned hydronephrosis, horse-shoe kidney, movable kidney, kink in the ureter, double ureter and reduplicated pelvis, and the so-called "Fixed ureter." Hydronephrosis is a condition easily and absolutely diagnosed by pyelograms. In a unilateral dilated pelvis one should always examine the ureter on the affected side for evidences of obstruction, namely a stricture, kink or a small calculus. Oftentimes it is possible to save such a kidney if we remove the obstruction below and do a Mikulicz plastic operation at the ureto-pelvic junction. The passage of a ureteral bougie and a wax-tipped catheter will always rule out these conditions as etiological factors. The horse-shoe kidney (7) will also be readily revealed on examination of the pyelographic plates. Movable kidney is a condition not infrequently met with and occasionally escapes recognition even after repeated examination. It can be diagnosed definitely after two sets of pyelograms are taken one with the patient in the upright position and another with the patient lying flat on the back or with the head and trunk lowered. The same procedure should be followed in locating a kink in the ureter. In this instance it is well to insert the ureteral catheters only a few centimeters up the ureter so that the natural form and outline of the ureter may be observed. A ureteral catheter inserted clear to the pelvis may occasionally straighten out a very disturbing kink in the ureter.

Pain in the kidney region and even severe renal colic with negative X-rays, normal urine and normal kidney function and negative wax-tip examination is occasionally due to a reduplicated ureter and pelvis. This is found on taking a pyelogram in which the condition is clearly and strikingly demonstrated.

Another condition which seems to be a very definite lesion in the etiology of renal colic is a "fixed ureter," or one bound down by abnormal adhesions. Examination in this instance is absolutely negative throughout. The pyelograms particularly show absolutely no deviation from the normal. This condition occurs in young men and is apparently without known cause. This is the type of case recently mentioned by Pilcher (8). During the past two years three cases of this type occurred in the service of Dr. J. T. Geraghty at the Brady Urological Institute and the writer who had the privilege of caring for these patients on the wards can speak positively of the relief of symptoms accorded these individuals by a simple freeing of the ureter from the kidney pelvis to about half way above the pelvic brim.

The symptom of renal pain and also a typical colic is per-

haps always due to a definite lesion. Fortunately though practically all such lesions lend themselves to treatment with highly satisfactory results. The important element in the management of these cases is to thoroughly understand the cause of the symptoms. This knowledge at the present time is readily obtainable by the modern diagnostic methods and in all instances where uncertainty exists a thorough renal study is not only indicated but will invariably yield the best results for both patient and physician.

607 Electric Building, Buffalo, N. Y.

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Non-Specificity of Tuberculin Reactions. Fishberg, Pulm. Tuberculosis, book, pages 32 and 319, considers the various reactions due to supersensitiveness to foreign proteins generally in harmony with Victor C. Vaughan's theory of protein intoxication. Thus tuberculous individuals may react positively to various other bacterial toxins while persons not actually infected with tuberculosis, may react positively to many of the tuberculin tests. However, the tests are not without value for generally speaking, a supersensitive individual is liable to infection.

Origin of Mineral Contents of Mineral Springs.

DR. FELIX VON OEFELE, New York.

Mineral spring waters contain a varying amount of different mineral constituents in solution. The number of predominant chemical constituents found, including bases and acids, does not exceed a dozen. This definition concerns all the natural existing waters obtainable. Chemically pure water can be produced by the artificial reaction of pure hydrogen and pure oxygen in the chemical laboratory.

Pure water is kept pure with difficulty; it is a colorless, odorless and tasteless fluid and has a high solvent power for many chemical compounds. An almost pure water is the so-called distilled water purified by evaporation and recondensation of the vapors obtained. It is similar to rain water, but still purer. The rain water is distilled by nature and absorbs some vapors and suspensions of the air, from which the artificially and properly distilled water is protected. Water as it falls from the clouds in the form of rain, absorbs particularly, various gases, impurities of the air, so that when obtained in its purest natural state, it contains Oxygen, Nitrogen, Carbonic acid and some times traces of carburated Hydrogen, Sulphurous acid, Nitric acid and Ammonia.

Having fallen upon the earth, the principal part of this water penetrates the soil and rocks of the surface of the earth and it may lose some part of its contents, but takes up various other salts and organic substances from the soil. It reappears earlier or later on the surface of the earth. This reappearing water keeps in solution, more or less material dissolved from the soil and rocks.

If spring or well waters have been evaporated, a small amount of residue is left corresponding to the carried mineral derivatives. It is a small list of mineral compounds found in this average residue. An arbitrary combination and variation of salts by the reporting chemist often seems to indicate to the laymen a larger number of constituents. That is pseudo-scientific caprice, but not natural constitution of the water contents. The common mineral constituents of the waters vary by absolute and relative amount in a very large percentage of springs and wells within narrow limits, and allow the domestic and technical use of these waters. A small percentage exceeds these limits remarkably in quantitative or qualitative or both directions; they show a clear pharmakodynamic effect upon the human organism. These later small percentage is understood in general perception as mineral springs of proper sense.

The world-wide similarity of the majority of average springs and wells is understood from the geological development of the surface rocks of the earth as part of our sun system.

All spring waters having been in contact with different strata of the earth differ from the original rain water holding in solution variable quantities of anorganic compounds, the nature and quantity of which depends upon the geology and petrography of the region. The primary and secondary constituents of the surface of the earth are derived from a uniform thick cover. This consisted of a combination of very few chemical elements. Therefore every spring water contains some carbonic acid, sodium, calcium, chlorine, sulfuric acid and silicon, on account of the original chemical constitution of the earth's surface and the relative solubility of the constituents.

The same constituents are the anorganic matter of the human serum and of all the physiological liquids of animals and plants. Average springs contain then, too, smaller quantities of some rarer constituents, for instance Potassium, Magnesium, Bromine, Iodine, Iron, Aluminum and other ones.

If we still stick to the theory of Laplace for the formation of our sun system, some time ago the entire mass of sun and planets together was a large gaseous sphaeroid with an equatorial diameter exceeding the distance of Neptune to the sun. According to the physical laws governing the gases this sphaeroid contained concentric layers. The elements have been entirely dissociated. The surface layer was formed by Hydrogen. The next gaseous layer must have been Helium, the third Lithium, the fourth Berillium and so on down to Uranium and farther unknown elements exceeding the atomic weight of 238.

Not one of these layers was chemical pure. It was the same condition as that still persisting in our atmosphere which is not exactly divided into a lower part of Oxygen and an upper part of Nitrogen with the small difference of volumic weight 7:8. We have to consider in later parts of the balneology the exhalations of carbonic acid. Where the earth exhales carbon dioxide with the volumic weight of 11 in relation to the above figures 7 and 8, this difference is large enough to create a persistent bottom layer of carbon dioxide. The Grotta del cane in the vicinity of Naples, Italy, is known to contain on the bottom about 8 inches high an air containing about 77% of carbon dioxide. The air of a higher level contains less than 2% carbon dioxide. A light on the bottom is extinguished and a small dog dies within a short time, but human beings in an upright position, are not hurt.

In the neighborhood of highly carbonized springs, particularly in cellars in the district of carbonized springs, the carbon dioxide layer may reach the mouths of men and kill them.

At Bad Neuenahr the director was a tall man and I am a short man. We once were within the fence of the Grosse Sprudel. By some natural circumstances the upper level of concentrated carbon dioxide started to raise and reached my mouth with the characteristic taste. I quickly jumped to a higher step, but the director laughed and went out slowly; he was safer on account of his height. This carbonized spring was thrived 60 years ago and excludes the general public by a closed iron fence. Before laborers can work there in times of the high tide of the carbon dioxide, the excess of this gas has to be expelled by a certain device. In two different years a small girl and a porter died there of suffocation upon entering the fenced space. The porter died as he stooped to pick a lost ball. To the exactness of a quarter of an inch the boundary between highly concentrated carbon dioxide and respirable air can be given. Where this boundary level touches the vertical surrounding walls, a line of demarcation is visible to the human eyes. The carbon dioxide below this plain is never free of a mixture of oxygen and nitrogen and the air above this plain is never free of carbon dioxide. But this plain is a clear demarcation of the preponderance of constituents.

The physical laws are important in another sense for balneology. The brittle soil of the earth contains organic matter continuously becoming carbon dioxide and besides this water. The water evaporates with a volumic weight below 5 in the above calculation and for this reason shows a tendency to enter the atmosphere and to ascend within it. The carbon dioxide with the weight of 11 can not escape from the soil and becomes absorbed by the circulating water of the soil. Every spring water contains therefore a higher percentage of carbon dioxide than rain, lake or river water. This content of carbon dioxide does not entitle it to the claim of being a carbonized mineral water.

The laws of separation of gas layers are general laws and have been shown important for some properties of mineral waters. We have to keep them in mind for later parts of balneology. There we consider the gaseous layers of the aboriginal sun system. The layers were no separation of chemically pure evaporated elements. Every one contained a good amount of absorptions of others, some times to a great distance. It seems that particularly the electro-negative ele-

ments had a high tendency to be absorbed to lower layers and electro-positive ones to higher layers.

For this reason and on account of the thin layer declines from the equator to the poles, covered with lighter elements, hydrogen, helium, etc., are present down to the central sun. On the other hand Neptune, Uranus, Saturn and Jupiter consist principally of the elements of lowest atomic weight.

They are formed from the outermost part of the equatorial surface layers including no part of the deeper layers. I would say, that Neptune is a concentration of Lithium and Beryllium. Uranus shows a decrease of these elements and an increase of Boron and Carbon. Saturn may bear a high excess of Nitrogen and Oxygen. Jupiter may consist principally of Fluorine, Sodium and Magnesium. Of the electro-positive elements the planetoids may contain still an excess of sodium and magnesium and of the electro-negative ones Phosphorus, Sulphur and Chlorine. Mars may approach the earth's composition, but with predominant Calcium. The earth contains principally Iron, Silicium and Oxygen. If Zinc and the elements of rare earths prevail in Venus, its volumic weight may be understood. On this basis Mercury has to contain predominant silver. The heavy elements are present in the sun in a very high temperature and are decreased by heat extension in the average volumic weight of the sun to about the figure of Jupiter. The volumic weight of the moon is still smaller than the earth. The moon has attracted a large quantity of Calcium and Aluminum.

The consolidation of the earth repeated the same process of formation of gas layers as the separation of the planet bodies from the remaining central body, and the formation of the moon from the earth. The solidified surface shows a concentration of the lightest solids. This makes it understood, that compounds of oxygen, aluminium and silicium predominate all over the earth's surface.

Gneiss and Granite were the original cover of the earth. These are rocks with a high degree of free acidity on account of an excess of silicium dioxide. Basalts, lava and other eruptives from deeper strata of the original doughy earth skin approach neutrality. Maybe within the condition that vaporous earth surface was formed, Silicium and Oxygen had already an affinity to form the chemical compound of silicium dioxide, but iron may have been still dissociated to separate atoms in analogy to mercury vapors. Both constituents would have not more difference of volumic weight than Nitrogen and Oxygen up to this time mixed in the atmosphere. Silicium dioxide and iron monatomic may have been the principal part of the aboriginal sun sphaeroid form-

ing the present earth. This would indicate vapors of the volumic weight 28 to 30 measured by diatomic Hydrogen gas of the same condition. The absorption of this original gas layer did not include impurities by elements of a higher atomic weight than 238. The central parties of sun and maybe small admixtures of Venus and Mercury may contain this further continuation of the periodic system of elements.

In the time that the sun system was a gas sphaeroid, the chemical elements had very little or no tendency to form chemical compounds. They were compressible by the pressure of overlasting gases and absorbed the one the other to a small amount as above mentioned for the lower and upper part in the Grotta del cane. Their volumic weights within this compression are still in direct relationship to the molecular weight. This condition of compressed gaseous concentric layers still persists in the sun, as N. Johannsen of Rosebank, N. Y., claims. It forced the separation of the different elements and their simple compounds to strata similar to an onion body. The principal constituents of the earth ball may have been, as explained, Silicium dioxide and iron. They sedimented again and also their admixture of rarer elements, as they reached the liquid and solid condition, where the relationship of volumic weight became strongly changed. Uranium was an original small central nucleus, Thorium and other ones followed in the centre. The surface showed Hydrogen, Helium, Lithium, etc., in small amounts. Nitrogen and Oxygen followed in larger amounts. This arrangement became disturbed, by decreasing temperature, as more and more elements became cooled to a point where the chemical affinity start to be efficient, or the element liquefies or both happen. Most of the elements had become liquid or semi-solid, while the original onion-like arrangement persisted. The new chemical reaction was in efficiency between neighboring shells of elements. Carbon and still more Silicium had the highest affinity to oxygen in the high temperature and pressure. Graphite is present together with Silicium dioxide. Silicium dioxide particularly from the condition of compressed vapor going to a liquid or semi-liquid condition lost very much of its relatively high volumic weight. Its property as acid radical enabled it to stay mixed as acid salt (bisilicate) with basic elements of a lower atomic and volumic weight or of not very much higher atomic weight forming the chemical compounds of the solid surface of the earth. Some of the elements of lower atomic weight persisted as an excess of gases forming the atmosphere.

Small amounts of the heavier elements became impurities

of the silicated rocks of the original surface. Other small amounts of compounds of rarer elements were ascendingly pressed in faults and cracks of the solidified surface by the different reactions between surface and contained interior. The metal sulfides often found in veins of the rocks may be principally sublimations of lower gas strata to the surface after first solidification.

The compounds of the original solidified surface became crystals in the slow cooling process. The commonest of these rocks are granite and gneiss with very many variations of size and arrangement of the three constituent kinds of crystals: mica, feldspar and quartz. Later on by decomposition they delivered the principal material for all the surface layers of the earth.

This is the reason that the number of predominant elements of the oldest solidified surface of the earth and of sedimentary rocks is very small. The following geological development of the earth surface was principally shrinking with formation of mountains and valleys and secondary influences of circulating water.

Of the elements with valide affinities air contains 4, sea-water contains 30 elements in dissolved compounds. Rocks contain all the elements known in an irregular distribution over the earth's surface, but the principal part of the surface of the earth contains 8 elements found everywhere in larger or smaller quantities.

Within the crystalline rocks, the average is:

Oxygen 46.3%.

Silicium 29.5%.

Aluminium 8%.

Iron 6.1%.

Calcium 3.7%.

Magnesium 1.4%.

Sodium 2.5%.

Potassium 2.3%.

This restriction of the average surface is due to the above explained development resulting in granite and gneiss to being the real skin or bark of the earth ball.

Iron is really the predominant constituent of meteor stones and seems according to calculated average volumic gravity 5.6 of the complete earth to be the principal part of the interior earth. Some of the rare elements of high atomic weight may become predominant toward the centre of the earth in an amount unexpected from the surface condition.

Water which reappears from the earth, had the greatest chance to dissolve some of the common surface constituents. The compound of sodium and chlorine was the most easily

soluble constituent. It became dissolved and almost exhausted from the crystalline rocks in the long geological eras. It has been carried by the circulating water to the sea and stays there retained, if some part of the surface of the ocean is reevaporated. The earth surface is as a rule fairly exhausted of sodium chloride. The percentage of other soluble constituents of the uppermost layers of earth surface is small and the chance of reappearing water to have obtained a supply of very deep strata is slight. We will term these deeper strata juvenile rocks. The surface layers then, too, no longer contain absorbable gases in remarkable amounts. Waters rising from juvenile rocks may be charged with a high amount of gases. The exceptionally small amount of newly formed carbon dioxide of the surface is referred to above.

All the water which reappears out of the earth, was in contact at least with the brittle drift containing traces of carbon dioxide and mostly with some further exhausted layers of rock, and it dissolved there a small amount of the remaining material, derivatives of original gneiss and granite and soluble with difficulty. This is the condition of the majority of springs and wells, which imparts a similarity to the majority of spring and well waters.

In general the common constituents of mineral waters derived from the average constitution of gneiss and granite, we will term invalid or common constituents and other constituents we will call valid or rare ones. An intermediary group is the almost soluble invalid constituents which may obtain an unexpected higher solubility by physical means, particularly by the colloid condition.

The rain water penetrating the surface tends to reach the deepest point down to impermeable strata. The surface of these strata is curled as a rule with some average decline in some direction. There the water follows the deepest paths and corrodes its ways forming continuous underground veins in an arrangement similar to a surface river system. On the contrary the underground waters run very slowly. By the long periods of existence of these veins, the already dissolved material amounts to so much that the surface above such underground veins shows clear depressions noticeable to an experienced eye. Where, by a hilly decline, the surface of earth reaches a deep point of such a current and where, moreover, the underlying impermeable stratum does not allow a deeper penetration of the running water, the water reappears continuously running to the surface. Often such a spring in the original condition is still covered by a small amount of brittle drift or it may form a swamp of its vicinity.

It is a matter of experience to learn from the configuration of the surface the location and direction of underground water veins. I obtained this experience in the first years of my medical practice in farm regions. My main teacher was Aufschlaeger, a blacksmith at Simbach in Bavary, not a scientific, but a practical man. This experience is very important to find out places suitable for well digging. While practicing in Lower Bavary, I was consulted in a large circuit for farmers water supply. For decades I have done no more practical work in this field.

Non-Protein N. and Urea in Maternal and Foetal Blood at Time of Birth. J. Morris Slemons and W. H. Morris (sic), Bull. Johns Hopkins Hosp., Dec. 1916, summarize as follows:

1. In 35 normal obstetrical patients at the time of birth the average rest-nitrogen in the maternal blood was 25.2 mg. per 100 cc. (extremes 18.5-33.5 mg.); in the fetal blood the average was 24.9 mg. (extremes 19.34.2 mg.).

2. In 16 normal patients the average quantity of urea-nitrogen in the maternal blood was 10.5 mg. per 100 cc. (extremes 8.4-14 mg.); in the fetal blood the average was 10.4 mg. (extremes 7.9-13.5 mg.).

3. The urea-nitrogen represented 44 per cent of the rest-nitrogen in the maternal and 45 per cent in the fetal blood.

4. The same concentration of urea in both circulations indicates that this substance passes through the placenta by diffusion.

5. Before this is said of the rest-nitrogen, each of its constituents should be studied separately, though it appears that equalization of the rest-nitrogen is normally maintained on the two sides of the placental partition.

6. Complications accompanied by an increase of urea in the maternal blood—toxaemias of pregnancy, syphilis, decompensated heart lesions, and others—are also attended with a corresponding increase in the fetal blood-urea. Pathological cases thus confirm the conclusion that urea diffuses through the placenta.

7. The administration of chloroform during pregnancy causes alterations first in the fetal and later in the maternal blood. Primarily the fetal blood-urea is increased. Prolonged anaesthesia causes a moderate increase in the rest-nitrogen of both circulations.

8. Asphyxia dependent upon impairment of the fetal heart-action is attended with a notable increase in the urea of the fetal blood. In cases of still-birth this generally represents 60 to 85 per cent of the rest-nitrogen.

BUFFALO MEDICAL JOURNAL

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Beginning the New Volume.

In spite of general business depression shortly after the assumption of the JOURNAL six years ago and some disturbances due to the world war, we are happy to report very satisfactory progress. The number of subscribers has rather more than doubled and the only source of loss worth considering is death. Local gains are necessarily small since the medical profession is almost at a standstill so far as numbers are concerned—a very salutary fact in view of the past excessive graduation of physicians—and since the local support has always been strong. Especially gratifying to all contributors, is the continued though moderate increase in subscriptions from a distance which excludes the idea of performing a duty and a purely local interest.

A journal of this nature cannot and, perhaps, should not be highly successful financially. The conduct of a medical journal by men not actively engaged in practice, involves a point of view which is extra-professional and, thus, a lack of sympathetic judgment in accordance with the actual standards of the profession. The JOURNAL has, however, for some time, carried a reserve covering two issues in advance and could cover 6 issues in advance if a comparatively small number of subscribers in arrears for several years, would view matters from the standpoint of the welfare of the JOURNAL instead of their own immediate convenience.

It is an open secret which should be no secret at all, that the major support of any periodical, excepting a few which are virtually endowed by private individuals or large organizations, a few popular magazines of large circulation, and a

few special organs of high price, is derived from advertising. This statement applies not only to medical journals but to newspapers and periodicals generally. It should be understood with equal clearness that the principal difficulty in the conduct of any periodical is the competition of the circular letter. Firms which have checked up the actual value of the circular, estimate that the returns are from $\frac{1}{2}$ to 3%. This is a small ratio but many firms, or at least their advertising managers, prefer actual figures to general impressions. Hence, we ask, not for this journal alone, nor for medical journals as a class, but for all periodicals, that readers should indicate the source of their information. If an advertisement is keyed, ask for catalogue 25659, or address to Dept. K, or insert the street address, even if you know that catalogue 25659 is precisely the same as No. 24371, or that Dept. K simply means that the reply is from the paper in which you read the advertisement, or that the street address is unnecessary to reach the addresses or incorrect—or, perhaps better yet, ignore the key and state that you saw the ad. in such and such a periodical. Most busy men have a convenient file for circulars, woven from willow twigs. Use it and let advertisers know that it is in common use.

A journal of this kind obviously cannot maintain a press bureau nor a reportorial staff. We, therefore, ask the co-operation of the profession in communicating news items, especially of deaths in the profession.

Some Questions as to Rank in the Army Medical Service.

There is a wide spread misconception that the Medical Department of the U. S. Army consists of a small body of men not intimately connected with military administration, not executives except in the sense that any organization involves subdivision of authority to conduct its own affairs and in that applying to the professional ministrations of any physician, more especially not holding commands in the military sense, indeed not even having the men over whom they might hold authority, and not combatants. With this notion in mind, the commissioning of medical men in the army and their designation by military titles are regarded, respectively, as a convenient compromise for the sake of allowing the payment of salaries necessary to secure the services of professional men, and as a sort of unmerited and purely honorary degree.

Conceding, at the outset, the considerable and inevitable differences between line and staff service, an examination of facts may prove enlightening. Beside the three general

branches of infantry, cavalry and artillery, there are 13 special departments of the army of small magnitude and for which there is no general term in common use. Seven of these number well within a hundred and of these, several consist practically entirely of officers detailed for special duties, with such clerical help as is necessary and which is, for the most part, not included as part of the army personnel. The Military Academy, inclusive of 706 cadets numbers about 1300; (statistics of 1916); the Ordnance Dept. 850; the Signal Corps 1578; the Engineers 2,190; the Medical Dept. 4,616; the Quartermaster's Dept. 6,590. It will thus be seen that the Medical Dept. ranks second in numbers among what many persons regard as army accessories. It is almost certain that it will be increased many times in numeric strength within the next few months, and its increase in commissioned officers will be relatively greater than that of any other branch of the army, on the basis of ultimate numeric strength; and it is not at all improbable that it will become the largest branch of the army aside from the line.

One of Kipling's characters speaks scornfully of a staff officer as "The Colonel Sahib without a regiment." Many persons have believed that this thought applied especially to the medical officer but, in general, it applies less strictly to this department than to other staff organizations. In 1916, the whole number of commissioned officers was about $\frac{1}{21}$ of the total army; the number of medical officers about $\frac{1}{8}$ of the total medical force. With due allowance for men coming under the authority of medical officers in a purely professional way, there is no question but that the medical officer commands as many men as the average line officer. If we consider the authority of general officers over commissioned officers of lower rank, which is a rather fairer method of weighing authority and responsibility, we find that the Surgeon General (Major General for the last two years, previously Brigadier General) has an extent of command at least 50% greater than that of the average. It is, of course, impossible to foretell the future but it is highly probable that, within the next year, the Surgeon General will exercise a command over men, equal to that of a Major General commanding a division and over officers, equal to that of the commander of a field army.

Near the other extreme, consider the command of the Captain of an ambulance company: 4 1st lieutenants, 1 1st sergeant, 11 sergeants, 5 mechanics, 2 cooks, 2 assistant cooks, 20 chauffeurs, 2 musicians, 43 privates; total 90. On a numeric basis, his command is about $\frac{2}{3}$ that of a captain of the line on the nominal strength of a company; but it is far

greater in numbers if we allow for the wounded coming under his care; greater in responsibility if we regard merely the rank and distribution of the men under him; enormously greater either from the standpoint of property responsibility or of personal initiative when we consider the relatively greater degree of independence of next higher officers.

It is true that, outside of his own department, the medical officer does not exercise command, even under circumstances in which a line or staff officer would supersede another or assume charge of troops without a leader. For example, we know a captain of Volunteers during the Civil War who claimed to have commanded a division for a brief time. In many respects, however, a medical officer exercises the general influence of any other and it is reported that, in emergencies, they have led, though they could not formally assume command of bodies of troops.

The medical officer is not a combatant in the strict sense of the word but, under modern conditions, he incurs the hazards of war to a degree in some respects greater than that of others, especially if we exclude subordinate officers of the line. For example, the experience of the British Army in the present war is that officers have a greater mortality than privates and that, of all officers, the medical have the highest mortality and, strangely enough, those of the aviation corps, the lowest. No officer is, under modern conditions, expected to be a direct factor in combat and if a distinction is to be made at all with regard to combatancy, it would perhaps be less unjust to draw it according to the safeguards properly attending high rank or to apply it to special branches of the service whose duties afford greater exemptions from danger than those of the medical department. The fact is that any such distinction is essentially unjust, wherever and whatever the arbitrary line drawn.

There is one phase of the matter of military rank that may not have occurred to line officers who are reluctant to recognize it in members of the medical department. The medical man has had a degree and extent of educational and technical training fairly comparable with that of a West Point graduate though undoubtedly less onerous during its reception; still more closely comparable with that of a professional engineer or other military specialist. More than this, the selection of applicants has, for many years, taken only a small minority of candidates for appointment as assistant surgeon and the knowledge of this fact has deterred the vast majority of medical graduates from even applying for examination. The army doctor has, deep down in his heart, the pride of the honor man among the line and other

departmental officers. At the present time, a great many of the volunteers for army medical service, aside from the very youngest, are men who are, from patriotic motives, or at the worst, motives connected with efforts at technical improvement or desire for a change, accepting a rank considerably below what they would now hold if they had entered the army as a career and, very likely, still further below the rank which corresponds, in pay and prestige to what the title "Doctor" now means to them. Such men are not at all apt to insist on the use of a military title as a matter of humbleness, though they may do so in the natural attempt of all beginners to conform to the letter of requirements.

The rank of the medical corps, with reference to that of other branches of the service, seems to have been quite well adjusted in this country. The lowest grade is one higher and the highest one lower than for the army as a whole and the proportion of officers of different rank corresponds fairly well with the general figures. In the rapid expansion now in progress, special problems arise. For example, men of practically no military experience are undergoing training with the expectation of receiving commissions of the three lower grades, immediately, somewhat according to age. If for example a young man, with a high school education and no special training, is to be commissioned a captain in the line or of engineers, it does not seem fair to commission an older man, with a college education and a technical training in medicine, a first lieutenant. On the other hand, it would be equally unfair to the regular medical officer to place a volunteer from civil practice in the same rank that he himself has won by years of hard work and attention to duty. There does not seem to be, however, the degree of candid political favoritism in the appointments, that was manifested in the Spanish War and the credit for this is largely due to the foresight of the Medical Department in inaugurating the system of a Reserve Corps, which has recently been extended to the army as a whole. None of these problems can be solved satisfactorily to all and without delay. One of the tests of patriotism is to make practical allowance for this fact.

(Note. This article has been submitted to the Surgeon General's Office for criticism and has been recommended for publication, with a minor correction).

Public Instruction in German.

Since our entry into the war, protests have arisen all over the country, against the teaching of German in schools,

especially public schools. We hold no brief for the German language beyond its spelling. In an entirely unprejudiced spirit, or at least with no prejudice due to belligerency, we may express the opinion that the genders, the strong declensions and conjugations, the multiple declensions of adjectives and the construction are as atrocious as English spelling and we do not know of anything worse that can be said regarding a language. But the objection to teaching German is, first of all, a silly form of hostility that will logically extend itself to some of the best music and literature of the world. Secondly, while the German language itself is not what we would wish it to be, it is, as intimated, the key to literature of the highest grade and of large scope—rivalled only by Greek, Latin and English—as well as to technical writings of all kinds, including medical, which are, on the whole, unrivalled in any other language. “If that be treason, make the most of it.” Thirdly, as a common sense matter of protection against espionage, and as a general preparation for military and economic problems, the more Americans understand the German language, the better.

BOOK REVIEWS

Books mentioned may be inspected at and ordered through this office. So far as possible, books received in any month will be reviewed in the issue of the second month following. Pamphlets, quarterly and similar periodicals, reports, transactions, etc., will, as a rule, merely be mentioned.

Acute Poliomyelitis. George Draper, M. D., N. Y., P. Blakiston's Son & Co., 149 pages, 19 illustrations, \$1.50.

There is a “foreword” by Simon Flexner but this is followed by “contents” instead of inhold. Recent statistics are presented for 5496 N. Y. Cases. These included 94 cases in the age group 10-15; 32, 15-20; 40, 20-30; 25, 30-40; 7, 40-50. verifying the evidence of more general and less accurate statistics that this disease is really no more infantile than the average acute semelincident fever. Passive immunity has never been secured and only partial success has been achieved with experiments in active immunization of monkeys, several attempts with small or attenuated doses or virus having produced the disease itself. The Flexner-Noguchi organism is considered to be practically established as specific. The work is largely clinical but well summarized. The studies of types and of probable routes of infection—in either the anatomic or the geographic sense—are especially interesting.

Pronostic De La Prostatectomie. Dr. Victor Pauchet, Amiens. Illustrated pamphlet, based on 400 cases, with special reference to use of local anaesthesia.

The author advises operation in practically all cases except those obviously excluded by age and feebleness or those presenting mild symptoms easily controlled by catheterization. He has operated in about 80% of all cases encountered, the operations being about equally divided between those of one and of two sessions.

Le Cabanon (The Dungeon), Lucien Graux, published by A. Maloine & Fils, Paris. Paper cover, 196 pages, 4 francs.

This is a historic and clinical review of the use of incarceration and retentive devices in insane patients. The author favors their disuse and reports experience in various hospitals for the insane, showing the extent to which cells of different types are actually used.

Diseases of the Stomach, Intestines and Pancreas. By Robert Coleman Kemp, M. D., Professor of Gastro-intestinal Diseases at the Fordham University Medical School. Third edition, revised and enlarged. Octavo of 1096 pages, with 438 illustrations. Philadelphia and London: W. B. Saunders Company, 1917. Cloth, \$7.00 net; Half Morocco \$8.50 net.

The first edition of this work was a surprise to its readers. In many ways, it departed from the customary standards of discussion of gastro-enterologic conditions, introduced many novel methods, evinced originality, not as usual, in regard to one or a few developments of personal interests and research, but in regard to the general point of view and the whole conception. Yet careful reading showed that the author was neither an iconoclast nor a reconstructionist. Perhaps because the broadening influence of this author has been felt by more recent contributors to the general subject, the contrast does not seem so marked for the third edition. The work has been perfected in many details and has included various recent advances.

Some Personal Recollections of Dr. (Edward Gamaliel) Janeway. James Bayard Clark, G. P. Putnam's Sons. 36 pages, frontpiece portrait of Dr. Janeway, \$1.

Progressive Medicine, edited by H. A. Hare and L. F. Apple-

man of Philadelphia; published by Lea & Febiger, Philadelphia and N. Y.; quarterly, \$6 per year. Vol. 20, No. 2, June, 1917. 362 pages illustrated, reviewing recent progress in regard to Hernia (Wm. B. Coley); Surgery of the Abdomen (John C. A. Gerster); Gynaecology (John G. Clark); Diseases of the Blood, Diabetic and Metabolic Diseases, Thyroid, Spleen, Nutrition, Lymphatic System (Alfred Stengel); Ophthalmology (Edward Jackson).

This work is not only an index of periodic literature but a digest and critique of medicine in the light of the most recent and most authoritative studies. We call attention to a minor point that ought to be corrected: the confusion of volume and number on the title page.

The Roentgen Diagnosis of Diseases of the Alimentary Canal.

By Russell D. Carman, M. D., Head of Section of Roentgenology, Division of Medicine, Mayo Clinic and Albert Miller, M. D., First Assistant in Roentgenology at the Mayo Clinic. Octavo of 558 pages with 504 original illustrations. Philadelphia and London: W. B. Saunders Company, 1917. Cloth \$6.00 net; Half Morocco \$7.50 net.

This is a most excellent, practical review of the subject, obviously based on large and discriminating experience. One general criticism might be made, purely from the didactic standpoint and in the interests of readers not themselves especially familiar with X-ray work. We would also qualify this criticism with the statement that it does not apply especially to the present book, indeed, less to it than to some others: Normal appearances, including what may be considered as normal variants, should, in each region or organ, be presented first and, perhaps be accompanied with diagrams or actual pictures. After having impressed on the mind of the student, the normal standards, each major disease or abnormality should be discussed systematically. It also assists the student to have all conditions shown from the front, and with right and left as in viewing the body, unless specifically stated to the contrary and otherwise represented for special reasons. Inexperienced students are also confused by differences according to the reproduction of positives and negatives, i.e. according to whether a relatively opaque area is shown as dark or light. Excepting purely diagrammatic delineations of areas marked on the exterior of the body, the authors seem to have used the latter method consistently. However, such a statement as accompanies Fig. 295: "The (gall) stones are seen as dark areas lying in the more opaque

bile," though occasioning no difficulty to one accustomed to X-ray studies, might easily be confusing to one unfamiliar with the subject, all the more so, if the reader did not realize that he was confused.

Mr. Britling Sees it Through. H. G. Wells, MacMillan Co., N. Y.

This is an unusual literary production. It is hardly a story, it has no central plot and not even the love episode is brought to a climax; the good and bad traits of the characters appear as in real life, without developing them into either heroes or villains. In a sketchy way, it reviews the history of the war and—how accurately we cannot judge—describes certain phases of English life. Mainly, it is a study of psychology—probably all the more valuable because not technical—as exemplified by the mental reflex to the changed conditions of war, by many persons of quite different type.

Raymond. Sir Oliver Lodge.

So much has been written about this collection of spiritualistic messages, that the book is somewhat disappointing even to one not a believer in such communications. The chief argument as to authenticity is the description of a group photograph of officers, including the deceased by a medium, before its existence was known to the family. It is not unusual to have such photographs made. Many of us not only fail to notify our family and friends of their existence but forget them ourselves. That a photograph including a dozen or so officers, including the son of a prominent parent known to be interested in spiritualism, should become known to mediums in advance of knowledge of its existence by the family, is not especially surprising. Indeed, if anything, the Mediums' Cooperative Assn. Ltd. or whatever it is called ought to have done a better detective job which would have avoided the slight inaccuracies in the description of the photograph admitted by the author. Possibly we are too greatly influenced by local pride but we would back mediums and controls within an afternoon's ride of Buffalo against those transmitting messages to Sir Oliver Lodge, for literary style, definiteness and thrill. The best part of the work is the letters of Raymond Lodge while in the flesh and doing active military duty. Like most other persons who have sent messages from the spirit world, he seems to have retrograded while the spiritual environment seems to be

distinctly less interesting, useful and elevating than that with which we are acquainted.

Roentgen Technic (Diagnostic). Norman C. Prince, M. D., Omaha; C. V. Mosby Co., St. Louis, 140 pages, illustrated, \$2.

This is a brief, practical treatise covering both the actual use of X-rays in diagnostic procedures and the development of plates, making of lantern slides, care of apparatus, etc. Chapter 5 on Positions and Exposures, is the longest and takes up in detail the various regional examinations, both for bone and visceral work. Chapter 6, on sinus injection, is the shortest—1 page—but by no means the least valuable. Chapter 8, Dark Room Procedures, throws light on a phase of X-ray work of which those not specializing in Roentgenology have almost no conception and which the man beginning to specialize in Roentgenology should study thoroughly.

Diseases of the Genito-Urinary Organs and the Kidneys. By Robert H. Greene, M. D., Professor of Genito-Urinary Surgery at the Fordham University, New York; and Harlow Brooks, M. D., Professor of Clinical Medicine, University and Bellevue Hospital Medical College. Fourth Edition. Thoroughly Revised. Octavo of 666 pages, 301 illustrations. Philadelphia and London: W. B. Saunders Company, 1917. Cloth. \$5.50 net; Half Morocco, \$7.00 net.

We have reviewed the earlier editions of this work which is so well known to the profession that we need say simply that it is accepted as a standard text book of comprehensive scope.

28th Annual Archaeologic Report, Appendix to the Report of the Minister of Education, Ontario, by Dr. Rowland B. Orr, Director of Provincial Museum, Toronto, 1916. 114 pages, illustrated.

The article on the Ape Man by Rev. W. R. Harris, D. D., LL.D., is of special interest to our readers, being a critical review of certain modern claims of discovery of primitive bones and of the reconstructions of early man, made from them.

Traumatic Surgery by John J. Moorehead, M. D., F. A. C. S. Adjunct Professor of Surgery in the New York Post-Graduate School and Hospital. Octavo volume of 760 pages with

522 original illustrations. Philadelphia and London: W. B. Saunders Company, 1917. Cloth, \$6.50 net. Half Morocco, \$8.00 net.

This work, while not essentially one on military surgery, incorporates the lessons of the present war and, so far as can be judged, adequately provides for preparation for duties in the field. It includes sections on traumatism from electricity, X-rays, etc., and on medico-legal problems, always a source of special anxiety to the surgeon. While systematic in the usual sense, its arrangement and indexing facilitate reference in emergency.

Index of Differential Diagnosis of Main Symptoms, by various writers. Edited by Herbert French, M. A., F. R. C. P., London. Published by Wm. Wood & Co., N. Y. 912 pages, 37 colored plates and over 300 illustrations in text. \$10.

The major part of the work is arranged alphabetically by names of conditions, such as ascites, pain, wheals, pigmentation or of organs under which general conditions as of enlargement and gross alteration are easily noted. Disease names are included only when they also refer to obvious symptoms, as anaemia, hemiplegia, etc. Indeed, it is difficult to discriminate sharply between names of diseases and of clinical conditions of a clinical nature. This is supplemented with an index, still more comprehensive but referring to parts of the index by heavy type. The text is by no means confined to differential tables—which are almost always superficial and somewhat inaccurate—but includes a very good treatise on clinical conditions, entering into pathogeny and even etiology whenever necessary for clearness of conception. The work is available not only for immediate reference but, perhaps even more for training in habits of accurate diagnosis. Instead of leading to a snap diagnosis or inculcating superficial methods of naming diseases, this work rather broadens the conception of the reader and induces him to reflection as to the essential nature of processes brought to his attention by symptoms.

Facts and Fallacies of Compulsory Health Insurance. Frederick L. Hoffman, LL.D., Statistician Prudential Life Ins. Co., 101 pages.

This does not lend itself well to a brief abstract but deserves reading throughout. The claims commonly made for the success of compulsory health insurance in Germany are

disputed, on the basis of comparison of American and German longevity, death, and suicide rates.

Diseases of the Stomach. Max Einhorn, M. D., New York, Wm. Wood & Co., 6th edition, 59 pages, 128 illustrations.

This edition has been considerably enlarged and modified to correspond to the developments of gastro-enterology. While conforming to the standards established for a comprehensive treatise, it deals to a considerable degree with the many ingenious devices originated by the author, among which may be mentioned the convenient assemblage of tubes for estimating pepsin, the stomach spray, insufflator and bucket, the duodenal tube and modification of the thread method, endoscopes, applicators, etc., including that for the use of radium and many others. The work, while limited by title to the stomach, necessarily includes the consideration of many associated disorders, though their discussion is not carried beyond the point requisite. Considerable attention is given to X-rays but we suggest that the first sentence under this heading should be changed. The mention of four men as having "succeeded in taking good Roentgenographs" is, under present conditions, a very mild statement and the implication is historically incorrect, so far as priority is concerned. It is difficult to single out sections for special commendation but the critical ability of the author is particularly manifested in those on ulcer, cancer and isochymia and a careful reading of these sections would not only tend to correct several quite general misconceptions but to prevent unnecessary surgery and to expedite operation when it is necessary. The author has also chosen the happy mean between the early exaggeration of the importance of intubation and chemic tests and the present tendency in some quarters to ignore these matters simply because of their familiarity. Beyond any single item that might be selected for praise, is to be emphasized the author's rare combination of practicality with thorough scientific acumen.

Eye, Ear, Nose and Throat. A Manual for Students and Practitioners, Howard Charles Ballenger, M. D. and A. G. Wippert, M. D., Chicago. Lea & Febiger, Philadelphia. 2d edition, 524 pages, 8 colored plates, 180 illustrations, \$3.50.

This is bound to correspond in pattern but not in color, to a series issued by this firm several years, covering various branches in medicine, though each book is complete in itself.

The present work has been thoroughly revised and is most excellent in its arrangement and text, being of scope intermediate between brief reviews and cyclopaedic works. Fig 8, a reproduction of a test card, needs a new plate.

Review of Instrument.

Dietetic Balance. J. F. Hartz Co., Detroit. This is a convenient spring scale with pan, indicating weights in units of 10 grams, up to 500. The dial is set by rotating so that paper, dishes, etc., required to hold non-solid or greasy foods, can be allowed for, and the indicator can be set at zero beyond the weight of container. One of the greatest practical obstacles to dietetic therapeutics and even economic studies is that very few persons, even physicians, have any conception of actual quantities in regard to foods. Knowing the



weight of an article of food tables are available to calculate quite accurately, the content either in proteid, carbohydrate and fat, or the calories. Without this knowledge, dietetics is a combination of guess work and aerothermia, so far as quantitation is concerned. Even knowledge of waste, as skin and cores of fruit, trimmings of meat, etc., is often important. This scale also familiarizes the user with the metric system. It can be used for determining postage and for various other practical purposes where heavy weights are not involved.

TOPICS OF PUBLIC INTEREST

Centenarians. Il Policlinico, Rome, Feb. 18, notes the death of Mmme. Rosa Posseti at Tarente, aged 107. Until a few years ago, she conducted a shop for the sale of wood. La Revista Medico Ocirurgica of Brazil, Nov. 1916, reports the death of Jose Fernando Guimaraes, born in Portugal in 1775, who died Oct. 13, 1916. Up to the age of 85, he was a shoemaker; he then took employment as helper in a store. Memory and sight were perfect till recently. The Vicount of Barbacena, robust and active at the age of 104 is also cited. Mrs. Louisa K. Thiers of Milwaukee, a literal daughter of the Revolution, aged 101 is among the purchasers of Liberty Bonds.

Increase in High Rank Positions in the Army Medical Corps. Senator Owen has introduced an amendment providing that the same proportionate distribution shall be made as for the Navy. This means $\frac{1}{2}\%$ generals, 4% colonels, 8% lieutenant colonels. With the regular army increased to 293,000 (act of June 3, 1916), the medical department will have about 2000 officers. Last year, it numbered 604: 1 general (regularly a brigadier, Dr. Gorgas having been made a major general for his distinguished services in the Panama Canal sanitation), 14 colonels, 24 lieutenant colonels, 105 majors, 239 captains and 221 first lieutenants. The new allotment will provide for 9 brigadier generals, 80 colonels and 160 lieutenant colonels, will allow promotion of one or two grades for most of the officers holding commissions in 1916 so that nearly all members of the department at that time will be at least majors.

New Poison Gas. La Suisse reports that the Germans have devised a new gas, smokeless and odorless and hence difficult to detect. Those inhaling it notice at first only a sweetish taste but it is very fatal and troops employing it have to wear masks continuously.

Transfer From Public Health Service to Navy. 17 surgeons of the former service have been transferred to duty with the Navy.

Dr. Samuel Guthrie. In the May and June issues, were published a biography prepared by Dr. W. V. Ewers of Rochester. Portraits here presented are of Mr. T. S. Chamberlin and Mr. F. C. Chamberlin of Chicago, respectively grandson and great grandson of the late Dr. Guthrie. These are said

by a lady now over 90 years old, to give a very good idea of the personal appearance of Dr. Guthrie at the corresponding ages. The former, she declares to be an exact likeness of Dr. Guthrie as she knew him. The Guthrie boulder stands at the entrance of Washington Park, Chicago, from Garfield Bvd., originally 55th St.



Million Acre Wheat Campaign for N. Y. A committee under the auspices of the N. Y. State Agricultural Society has

begun this campaign and will supply seed and fertilizer on credit. In 1879, 736,000 acres were devoted to wheat in N. Y. 30 years later, the average was 289,000. The total area of the state is about 32 million acres. The average yield of winter wheat in N. Y. is a trifle over 20 bushels per acre, as compared with a trifle less than 12 bushels of spring wheat in N. Dakota, a typical spring wheat state. This year, it is estimated that N. Y. will produce 9 million bushels of wheat on 430,000 acres. The home consumption of wheat for N. Y. State, including N. Y. City, is about 60 million bushels, requiring about 3 million acres, or about 1/10 of the total area of the state and considerably more than 1/10 of the arable land. From one point of view, it would be ideal to have N. Y. self-supporting as to bread stuffs but there are numerous practical points to consider. For example, milk as such, is equally needed and there are obvious reasons why it should be produced as near as possible to centers of consumption. Dairy products are also highly desirable and they have increased in price even more markedly than wheat and flour. Grains in general are practically free from serious problems as to preservation and transportation and the whole matter of food supply, must be worked out with reference to availability of fertilizer, avoidance of exhaustion of soil, labor supply, economy of transportation, etc., for the whole country. According to the estimate of June 6, the total wheat crop of the U. S. this year will be 656 million bushels, leaving about 36 million for export, whereas the Allies will need nearly 300 million bushels. From a narrow, domestic standpoint, the problem of wheat necessity could very easily be solved by using oatmeal for breakfast and some form of corn bread for one other meal. But, while oats and corn are commonly regarded as cheap cereals, the practical obstacle remains that they ordinarily retail at considerably higher prices than wheat flour and are still somewhat higher, in spite of the extraordinary demand for wheat and the agitation regarding economy of food stuffs. The same is generally true of other cereals that might be used as wheat substitutes. If we extend the investigation to vegetables generally, that may be considered as more or less available as wheat substitutes, the same practical economic problem is encountered in even greater degree. It occurs to us that food commissions should give their immediate attention to the oats and corn problem and determine whether the obstacle of price is based on essential economic factors or on other factors and should then extend the investigation to determine why fine wheat flour, refined sugar and even some tropical and semi-tropical fruits are relatively economic as compared with what

are ordinarily considered cheaper grains, leguminous seeds, fresh vegetables and domestic fruits.

Notes on Early History of Buffalo Medical Journal, contributed by Librarian of The New York Academy of Medicine. Buffalo Medical Journal, Edited by Austin Flint, (monthly), vols. 1-15, June, 1845 to June, 1860. Buffalo. Vol. 2-15, 1846-60, Title Buffalo Medical Journal and monthly review of Medicine and Surgical Science; vol. 15, 1859-60, running title in New York Medical Review of Medical and Surgical Science and Buffalo Medical Journal; it contains 13 Nos., June, 1859 to June, 1860; vol. 9, 1853-4, Sanford B. Hunt added as editor; vol. 11-12, 1855-1857, Dr. Hunt sole editor; vol. 13, 1857-58, Austin Flint, Jr., added; vol. 14, 1858-59, Dr. Hunt dropped; No. 10, vol 15, March, 1860, Dr. Douglas added; in July, 1860, merged in American Medical Monthly; vols 1-18, 1854-62, Buffalo Medical Journal and Monthly Review of Medical and Surgical Science; title of vol. 2-15, 1846-60 of Buffalo Medical Journal; Buffalo Medical and Surgical Journal, Edited by Julius F. Miner; (monthly), vol. 1-28, August, 1861-89; title of vol. 1, 1861-2, Buffalo Medical and Surgical Journal and Reporter; vol 13, 1873-74, Edward N. Busch added as editor; vol. 17, 1878-9, W. W. Miner added; in vol. 19, 1879-80, Thos. Lothrop, Herman Mynter, A. R. Davidson, P. W. Van Peyma and Lucien Howe became editors; Dr. Miner died Nov. 5, 1886.

Military Rank for Red Cross Workers. Assimilative military rank, with authority to use the proper titles, insignia and uniforms, is authorized by the War Dept. for all members of the Red Cross. This authorization is extended both as a courtesy and appreciation of services and to insure proper respect for the individuals by belligerent troops of all nationalities involved. It does not imply payment by the government nor responsibility for employment. The ranks range from that of major-general for the chairman of the war council, through all grades of commissioned and non-commissioned officers to private. Directors of camps, base hospitals, supply depots, etc., will be graded as majors, the assistant surgeons in these units being captains and first lieutenants. Officers of the Red Cross will also wear the Greek cross in red enamel, as the predominating mark of the service.

Military Vaccination. American soldiers, going to Europe, will be vaccinated against small pox, typhoid and paratyphoid A and B.

Poison Gases. The asphyxiating and lachrymating gases depend to a considerable degree upon *sabadilla* seeds. These contain *cavadine* and *sabadilline*, alkaloids and *veratric acid*. The Venezuelan supply was largely bought up by Germany before the war. A wild plant of the same genus is found in Texas and it is believed that this could be used by the allies. (Note: Without expressing a personal preference, we hope that the U. S. and its allies will secure a successful termination of the war by the means ordinarily employed in war for the last few centuries, with due allowance for improvements along established lines).

Filtration Plants. In 1900, less than 2 million inhabitants of the U. S. were provided by municipalities with filtered water. At present, 20 million are thus protected, in 781 cities and town.

Wheat, Corn and Oats. Here is a practical dietetic problem for the Food Director. The official Bulletin of the U. S. publishes some very interesting statistics of export for the 11 months ending with May 1917. For our present purpose, it is significant that wheat was exported at an average price of a little less than \$2 a bushel of 60 pounds, or at about $3\frac{1}{4}$ cents a pound; flour at almost exactly \$8 a barrel or 4 cents a pound. Corn was exported at about \$1.08 a bushel of 56 pounds, a trifle less than 2 cents a pound. Oats was exported at a trifle over 60 cents a bushel of 32 pounds, or a trifle less than 2 cents a pound. Export values are about as good an index of true values as can be obtained. The people of the U. S. are urged to use other cereals to replace wheat so far as practical and it would be a perfectly simple matter, involving no sacrifice either of nutritive value—except for a rather recondite allowance for variations in aminoacids in favor of wheat—or of palatability for practically every one to use some form of oatmeal for breakfast and some form of corn bread for one other meal, thus using wheat for only a third of the cereal nutrition and actually reducing the consumption of wheat for domestic purposes to about half the customary amount and liberating this amount for the Allies. But, here is a practical economic obstacle: Approximately and with due allowance for fluctuations in price of the raw and finished domestic product which have been marked in the last few months, the ultimate consumer pays about $\frac{1}{3}$ more for flour than the unground wheat is worth wholesale. On the other hand, he pays $\frac{2}{3}$ times as much for cornmeal as the unground corn is worth and $\frac{4}{5}$ times as much for "oatmeal" which is usually not a meal at all, as oats are worth

wholesale in the crude state. At present, with a promise of a reduction of wheat flour to about 6 cents a pound in the near future, we are paying not quite 8 cents; while cornmeal costs 6 cents and "oatmeal" 8 or 9 cents, according to the special preparation employed. We appreciate the fact that special, fancy preparations of cereal of any kind are expensive but we do not see why the elaboration of one grain into a flour or meal or other domestic product, should be materially different from that of any other, especially at a time when there are adequate economic reasons for the high price of wheat and wheat flour and patriotic reasons for replacing them with other cereals, usually considered cheaper and still actually and relatively so in the wholesale market.

Inaccuracy of Auditory Sensations. While human beings have communicated thought for many milleniums by speech, implying the discrimination of elementary vowel and consonant sounds, any one who has given attention to the matter realizes that phonetic speech changes considerably in the course of a few generations, that the actual pronunciation of the same word differs considerably for different individuals and, often without realization of the fact, from time to time in the same individual. Every little while a story is repeated in the press, with differences in local color, to the effect that a stenographer takes down in phonetic short hand, foreign speech which he does not understand. Most stenographers brand this story as a lie but it is worth while to inquire whether or not there are exceptionally acute ears which really do appreciate elementary speech sounds accurately. Recently, we have had our attention called to this matter by the repeated mistake of "Central" in understanding three as six. The two words do not have any sound in common and they differ in regard to number and arrangement of elementary sounds about as much as any two short words can. It is difficult to explain how even the most slovenly pronunciation of either word could approximate that of the other. Can any student of otology throw light on the confusion?

Exaggeration of War Losses of Physicians. Sensational statements have been made, as that 60,000 British physicians had been lost in the present war. As the entire population of the British Islands is only about 46 millions and the entire British population of the various other components of the Empire, scarcely as much more, it is probable that, aside from native physicians more or less qualified, who have not participated in the War to any great degree, there were not

much more than 60,000 British physicians altogether, at the outbreak of the War. At any rate, only about 12,000 have been employed in military duty and, up to June 25, the total losses for the duration of the War, were: 195 killed, 62 died of sickness, wounded 964. The deaths, with ample allowance for the remainder of the third year of the war, amount to 7 or 8 per thousand, per year. The expected deaths, in peace, for males of the ages covering active military service by physicians, amount to about 5 per thousand per year. In other words, not counting non-fatal wounds, the military risk amounts to about half of the inevitable risk of death under peace conditions. Yet it is said that the risk has been greatest for medical officers and greater for officers in general than for privates.

Warning Against Burma Bean. The U. S. Dept. of Agriculture calls attention to the fact that this bean has been shipped into the country via Canada, from the east. It resembles the ordinary navy bean (so-called because really used largely in the navy) but can be distinguished by the light yellow color and the presence of fine lines radiating from the hilum. They will not grow well except in the tropics and this is fortunate for they contain too much hydrocyanic acid to render them safe for food.

High School Graduates, Buffalo, 1917:

	Boys.	Girls.
Hutchinson-Central	79	103
Masten Park	63	87
Lafayette	110	130
Technical	82	9
South Park	14	14
Total	248	343

For any single age-year, at the average of graduation, about 2% fairly equally divided as to sex, would be eligible. Thus about 7% or 1 person in 14 of the rising generation in Buffalo, has a full high school training. In some states, the ratio reaches 10%.

The N. Y. State Narcotic Law has been amended and nominally takes effect July 1 but, owing to pressure of clerical work, has been postponed till Aug 1. All physicians should secure a copy of the law and read it and save it for reference. It is published in the Official Bulletin of the State Dept. of Health and may be obtained on application to Dr. Hermann M. Biggs, Health Commissioner, Albany.

N. Y. Medical Journal Ambulance. The A. R. Elliott Publishing Co. has presented a fully equipped Ford ambulance, through the Montclair N. J. Chapter of the Red Cross. We congratulate the company on its patriotism and wish the finances of this journal warrant a like contribution.

Gift of Ambulances. The Ford Motor Co. has voted to give \$500,000 worth of ambulances—about 1,000 to the Red Cross.

Centenarian. Mrs. Abbie Maria Harris died near Rome, July 7. She was born in the vicinity, Dec. 13, 1814.

The most modern hospital train to be found in this country or abroad has been presented to the state of Maryland by three railroads, the Baltimore and Ohio, the Pennsylvania and the Western Maryland. There are six cars which make up the train. Three of these are hospital cars, with forty-two hospital beds; an operating car, which it is claimed is not surpassed in the completeness of its equipment by any operating room in the city; a Pullman and dining car for the personnel of the hospital, and an express car which carries two motor ambulances. An overhead trolley by means of which a stretcher may be carried from one car to another is a special feature.

Automobiles for Military Purposes. We have good reason for stating, though without implying that the statement is authorized or that future emergencies may not change the conditions, that there will be no commandeering of automobiles and, as a corollary, that no patriots will have the opportunity to sell second-hand automobiles to the government. The factories can supply all that will be needed and the needs for the present war, under existing and probable future conditions, will not be excessive. There will be no spectacular charge of a light brigade in Fords.

Military Service for Lunatics. According to the Associated Press, the annual report of a German Lunatic Asylum at Settin, states that lunatics have proved unsatisfactory, on account of desertions, refusal to obey orders, and general lack of discipline. (Note: There can be no issue of opinion on either the question of efficiency or ethics. The real point at issue, as in regard to rendering corpses, is whether the report is true or garbled.)

Statistics of Women Physicians. Dr. Mary Sutton Macy of N. Y., Med. Rec., Apr. 21, has compiled statistics from the

Am. Med. Directory of 1916, judging sex by Christian names, not absolutely an accurate method on account of the frequent use of names that might be applied to either sex. Christian names, usually considered male, have been found among the alumnae of women's colleges and vice versa. The proportionate number of women varied from 0.47% for Alabama to 8.09% for Massachusetts. The percentages of women physicians connected with state societies varied from 0 for Delaware and Nevada (totals 6 and 5, respectively) to 69 for S. C. (total 13), and averaged 38.08 against 53.72 for men. The total number of physicians in the Continental U. S. is 145,240, women 5,518; including dependencies, 146,612 and 5,551 respectively. The distribution of the profession by states and of women by specialties is shown in the following tables.

Specialty	Practised Exclusively	Special Interest Expressed	Total of Medical Women Specializing
	by	by	by
Gynecology	53	466	519
Obstetrics	9	134	143
Pediatrics	10	119	129
Surgery	11	63	74
Ophthalmology, otology, laryn- gology and rhinology.....	42	29	74
Neurology	15	51	66
Psychiatry	21	36	57
Ophthalmology	24	25	49
Clinical pathology	14	20	34
Anesthesia	6	22	28
Otology, laryngology and rhi- nology	8	17	25
Pathology	9	10	19
Dermatology	6	10	16
Roentgenology	5	11	16
Tuberculosis	3	13	16
Orthopedic surgery	1	9	10
Internal Medicine	8	0	8
Laryngology and rhinology..	1	7	8
Public health	7	1	8
Bacteriology	4	3	7
Ophthalmology and otology..	1	4	5
Proctology	0	3	3
Urology	0	2	2
Totals	258	1,055	1,313

State	Total Physicians (A. M. A. Figures)	Women Physicians (Approximate)
Alabama	2,569	12
Arizona	307	9
Arkansas	2,637	25
California	5,687	520
Colorado	1,733	111
Connecticut	1,678	63
Delaware	261	6
District of Columbia.....	1,482	59
Florida	1,321	33
Georgia	3,421	28
Idaho	438	11
Illinois	10,648	657
Indiana	4,872	169
Iowa	3,751	170
Kansas	2,683	114
Kentucky	3,584	70
Louisiana	2,060	23
Maine	1,205	36
Maryland	2,292	74
Massachusetts	5,869	475
Michigan	4,360	176
Minnesota	2,447	96
Mississippi	2,048	18
Missouri	6,399	158
Montana	636	22
Nebraska	1,911	98
Nevada	154	5
New Hampshire	690	35
New Jersey	3,239	152
New Mexico	430	9
New York	15,670	710
North Carolina	2,102	22
North Dakota	586	13
Ohio	8,045	301
Oklahoma	2,634	54
Oregon	1,187	86
Pennsylvania	11,502	482
Rhode Island	772	26
South Carolina	1,399	13
South Dakota	676	19
Tennessee	3,457	30
Texas	6,240	81
Utah	465	16
Vermont	668	12

Virginia	2,547	20
Washington	1,695	77
West Virginia	1,729	30
Wisconsin	2,803	79
Wyoming	251	14
Alaska	86	5
Canal Zone	97	3
Hawaii	162	2
Philippine Islands	735	17
Porto Rico	292	6

Deaths from Automobiles for the first half of 1917, numbered 302 for N. Y. State, 160 for the city, 142 for the rest of the state.

German Birth Rate. 26 cities of 200,000 and over report an actual decrease of about 98,000 births, or 38.3% as compared with 1914 and the decrease for all cities of over 15,000 is 39.5%. (Such a fall is to be expected under present circumstances, for all belligerents, and is probably to be regarded as conservative. The destruction of property will be less severely felt if there are fewer persons among whom it is to be distributed and while the actual use of property of any kind is small by very young children, their presence is a considerable drawback in times of need, such as accompanies and immediately follows war.)

Typhoid Epidemic. The town of Orillia, Ont., in 3 weeks up to May 17, had 140 cases in a population of 8,000. In the same period, Toronto had 1 case in a population of 500,000. The water supply was not at fault and the epidemic was traced to milk.

Nutritional Value of Exports. A government statistician has estimated that the exports from the U. S. for a year, at the rate of the first nine months of the fiscal year from July 1 to June 30, 1917, would feed 17,686,000 persons for a year, on the Voit ration of 118 grams of protein, 500 of carbohydrate and 56 of fat, with a surplus of over 2¼ billion pounds of carbohydrate and 429 million pounds of fat. On the Chittenden ration of 60 grams of protein, 500 of carbohydrate and 56 of fat, 54,783,000 persons could be fed but there would be a deficiency of more than 4½ billion pounds of carbohydrate and 314 million pounds of fat. On the basis of an allowance of 3,055 calories, without specification, 20,388,000 persons could be fed. This allowance is high and as the proteid covers a considerably larger number on the low-

proteid standard and as the Voit protein standard is higher than is necessary, even if we do not concede Chittenden's claims to their full extent, it is fair to estimate that our exports provide for 25,000,000 persons a year.

SOCIETY MEETINGS

Brief reports and announcements of meetings of societies of Western New York, and those of general scope, are requested from Secretaries. Copy should be on hand the fifteenth of the month. Full transactions will be published at cost of composition.

The Medical Society of the County of Erie met June 18th, 1917, at 8:30 p. m., in the Buffalo Medical College, 24 High Street, Buffalo.

In the absence of the President and Vice-Presidents the Secretary, Dr. Franklin C. Gram, called the meeting to order and requested that a temporary Chairman be elected. On motion of Dr. Hopkins, Dr. DeLancy Rochester was elected Chairman pro tem.

Dr. Rochester thanked the Society and accepted the chairmanship for the evening.

The Secretary stated that the minutes of the previous regular meeting had been published in the Journal and on his motion the minutes were approved without being read.

The minutes of the Council meeting held May 22d were then read by the Secretary.

In these minutes a motion was made by the Council that \$500 be taken from the sinking fund and invested in United States Liberty Bonds. Inasmuch as this was no longer possible, because bond selling had been closed and oversubscribed, the Society disapproved this motion of the Council.

The Council also recommended that the Society endow five beds in the Base Hospital and spend \$250 for that purpose. This motion was approved by the Society.

The Council also recommended that the Society approve of the project of a Feeble-minded Colony at Akron, N. Y., and recommended the adoption of the following resolution:

Resolved, That the Medical Society of the County of Erie heartily endorse the action of the Vassar Club of Buffalo in establishing at Akron, N. Y., the Erie County Boys' Agricultural Colony under the direction of the Rome State Asylum.

That the Medical Society of the County of Erie recommend to the Board of Supervisors that it give moral and financial aid to this Colony by authorizing the Commissioner of Charities and Corrections to commit thereto proper in-

dividuals at proper rates; all for humanitarian as well as economical reasons.

That the President of the Medical Society of the County of Erie appoint a committee of five to inspect this Colony from time to time and to report to the Society at the annual meeting with recommendations.

- That the Secretary of the Medical Society of the County of Erie be instructed to advise the Board of Supervisors, the Commissioner of Charities and Corrections, the Superintendent of the Rome State Asylum, and the Vassar Club of Buffalo of this action.

On motion of Dr. Wende the proposed resolutions offered by the Council were adopted by the Society.

The balance of the minutes of the Council meeting of May 22d, 1917, were then adopted.

The minutes of the special meeting of June 7th, 1917, were read by the Secretary and adopted.

Dr. Jacobs, Chairman of the Committee on Membership, then presented the applications of Dr. Ernest M. Watson, Electric Building, and Dr. Carl G. Frost, 1246 Hertel Avenue, Buffalo, N. Y.

The Secretary was instructed to cast the ballot of the Society for their election, which was duly done.

Dr. Jacobs also presented the application of Dr. J. H. Dewees for reinstatement in the Society. The Secretary was likewise instructed to cast the ballot of the Society for the reinstatement of Dr. Dewees.

Dr. Jacobs also presented the application of Dr. William P. Clothier for retired membership.

Dr. Bonnar made a verbal report of the Board of Censors, which was accepted.

Dr. Woodruff, Chairman of the Committee on Economics, reported progress.

Treasurer Lytle stated that the By-laws required the Treasurer to acquaint the Society with the names of all those in arrears with their dues at the June meeting. On motion of Dr. Bennett the reading of the names of those who were in arrears, as required in the By-laws, was omitted.

The scientific part of the program was then proceeded with.

The first was a lecture on "Practical Methods for the Conservation of Vision," illustrated by lantern slides, by Dr. F. Park Lewis.

The next was a paper on "Health Insurance and the Medical Profession, from the Financial and Administrative Point of View," by Dr. Albert T. Lytle.

The third was a paper on "The Demands upon the Civilian Physician in War Time," by Dr. Herbert A. Smith.

All of these papers were discussed and a vote of thanks given to those who presented them.

Adjournment followed.

FRANKLIN C. GRAM,
Secretary.

The Eighteenth Annual Meeting of the **Lake Keuka Medical and Surgical Association** was held in Keuka College Auditorium, Keuka Park, Thursday and Friday, July 5th and 6th, 1917.

Program:

1. Patriotic Address, by the President, I. H. Levy, M. D., Syracuse.
2. "Reminiscences of an Army Surgeon of the Civil War," John Van Duyn, M. D., Syracuse.
3. "Transfusion," E. Libman, M. D., New York.
4. "Injuries to the Brachial Plexus," Howard L. Prince, Rochester.
5. "The Sympathetic and Autonomic Systems in Relation to Subacute and Chronic Diseases," M. S. Woodbury, M. D., Clifton Springs.
6. "Are Gastric Symptoms Co-incident with Chronic Appendicitis and Gall Bladder Conditions Relieved by Surgical Interference?" H. C. Buswell, M. D., Buffalo.
7. "The Clinical Application of Some Special Urologic Methods of Diagnosis and Treatment," Leo Buerger, M. D., New York.
8. "Detection of Renal Disease in Routine Practice," A. A. Jones, M. D., Buffalo.
9. "Recent Advancement in the Study and Treatment of Kidney Disease," J. R. Williams, M. D., Rochester.
10. "General Streptococci Infection Through the Nasal Accessory Sinuses and Tonsils," T. H. Halstead, M. D., Syracuse.
11. "Informal Talk on Recto-Colonic Affections and Operations," illustrated by Motion Pictures, S. G. Gant, M. D., New York.
12. "Caesarian Section,"—A Continuation. W. M. Brown, M. D., Rochester.
13. "The Serum Treatment of Pneumonia," Augustus B. Wadsworth, M. D., Albany.
14. "Psycho-Analysis," A. A. Brill, M. D., New York.
15. "Experiences in a French Hospital," E. S. Van Duyn, M. D., Syracuse.

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*Deceased.

PERSONAL

Announcement of removal, travel, and other matters of interest are requested. Please report errors in the listing of any physician in the State and other directories, that we may co-operate with the State Society in securing a correct list.

Drs. A. W. Booth, LaRue Colegrove and Abraham Lande acted as committee of arrangements for an outing and dinner at the Cold Brook Club, July 19. Dr. Colegrove gave a talk on Bone Chips. Those in attendance consisted mainly of members of the Elmira Academy of Medicine and the Chemung County Society.

Dr. Guy S. Carpenter, Health Officer for Waverly, underwent an operation for gall stones at the People's Hospital of Sayre, July 15. To date, favorable reports have been received.

Dr. F. J. Moyer, Jr., of Lockport, is a candidate for nomination on the Republican ticket for member of the Assembly.

Major J. W. Grosvenor, M. D., of Buffalo, is taking a vacation of several weeks at Atlantic City.

Dr. René Gaultier, our associate editor, has been awarded the War Cross by the French Government.

Medical Reserve Corps Appointments: We have been unable to secure anything approaching a complete list for western N. Y. and request that appointees send in their names as soon as commissions are received and also report assignment to duty or camp service. The following appointments have come to our attention: H. C. Fairbanks of Tonawanda, Victor A. Tyrasinski, of N. Tonawanda, Ward B. Manchester, Batavia, Albert F. Ostwald, Buffalo, first lieutenants; Otto von Renner, Charles E. Long, A. L. Benedict, Buffalo, cap-

tains. Raymond C. Hill of Bath, Surgeon to the Soldiers' Home, has been ordered to Fort Benjamin Harrison, (Indianapolis).

The following officers of the Medical Reserve Corps are in training at Fort Benjamin Harrison: Benjamin Van Campen, Olean; Willard De Forrest Preston, Attica; S. M. Allerton and Don M. Hooks, Binghamton; John C. Grabau, Buffalo; Geo. S. Allen, Clyde; Walton Hovory, Fairport; James S. Allen, Geneva; Floyd W. Hayes, Jamestown; Harmon H. Ashley, Machias; R. M. Ballantyne, Manlius.

Dr. Edward Clark of Buffalo has been appointed Director of Child Hygiene in the N. Y. State Health Dept.

Dr. Julian P. Hill of West Ferry St., Buffalo, has moved his residence but not his office to Hamburg.

Dr. Ulysses B. Stein has returned to Buffalo, after a residence of a few years in Newfane, and has opened an office at the corner of Delaware Ave. and Chippewa St.

Dr. Maud J. Frye of Buffalo, announces the removal of her office to 211 Highland Ave., practice limited to Diseases of Women.

Dr. J. D. Tillotson of Rochester has moved from 796 Clinton Ave. to 16 Champlain St.

Dr. G. C. Fisk has moved from Mt. Morris to 108 Pine St., Buffalo.

OBITUARY

Readers are requested to report promptly the death of all physicians in Western New York, or former residents of this region, or graduates of any medical school in Western New York, and to notify the families of the deceased of our desire to publish adequate Obituary notices.

Dr. Seba S. Bedient, Buffalo 1878, died at his home in Little Valley, June 23, aged 62.

Dr. Henry A. Record, Hahnemann, Philadelphia, 1865, died at his home in Forestville, April 22, of heart disease.

Dr. Edward Barnwell Bangasser, Buffalo 1913 and **Dr. Sigismund Edward Inda**, Buffalo 1913, were killed in an automobile accident, July 18. They were traveling together to

New York and, near Dayton, owing to the condition of the roads, their auto skidded into a ditch. Both were dead when found, shortly afterward.

Dr. Herbert Gordon Jones, N. Y. University 1881, died at his home in Utica, July 5, aged 59. He was Ophthalmic Surgeon, Utica Masonic Home, Attending Surgeon to St. Luke's Hospital and Coroner of Oneida Co. He was a past president of the County Society.

Dr. William Henry Bullis, Queen's University of Kingston, Ont., 1884, died at his home in Rochester, June 28, aged 59, following a surgical operation.

ABSTRACTS.

New Method of Auscultatory Percussion of the Chest. Robert M. Alexander, N. Y. Med. Jour., June 30. Instead of employing the usual method of determining continuity of any area, of the same anatomic and pathologic nature, by noting the different intensity when the stethoscope and percussing finger (or as in the editor's modification, a tuning fork, electric buzzer, etc.) or both over the same area or not, the author places the stethoscope over the upper part of the gladiolus of the sternum, or over the upper spinous processes and finds that a consolidated area transmits a higher pitched percussion sound to the stethoscope. He also combines the location of stethoscope and percussor by using a double diaphragm stethoscope and percussing over the outer diaphragm. This later method, we would suppose could be used in locating organs generally.

Paratyphoid A, With Relapse Showing Eberth Bacillus. P. Gerard and Fenestre, Le Prog. Med., Feb. 24, report a case, the diagnosis being determined in the attempt to explain certain contradictory serum reactions. They give the general warning that bacteriologic identification of the similar fevers due to typhoid and the two paratyphoid bacilli may be fallacious on account of one bacillus assuming the ascendancy in cultures.

Accident From Ignition of Ether. The Pacific Med. Jour., June, reports an explosion from a spark in a parabolic electric head-light. The name of the surgeon is withheld but it is said that he can readily be identified if seen and, from the lack of a note of mourning in the account, we infer that the results were not serious.

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BUFFALO MEDICAL JOURNAL

Yearly Volume 73

SEPTEMBER, 1917

Number 2

ORIGINAL ARTICLES

The right is reserved to decline papers not dealing with practical medical and surgical subjects, and such as might offend or fail to interest readers. Contributors are solely responsible for opinions, methods of expression and revision of proof.

Some Practical Considerations in Chronic Heart Disease.*

ARTHUR J. PATEK, A. B., M. D., Milwaukee, Wis.

In submitting a consideration of some facts that have a practical bearing upon our conception of disease of the heart, I will preface my remarks with an apology for their brevity and necessary incompleteness. In selecting but a few facts for presentation—without an effort at systematization—I am aware that there must be and are many others of equal—perhaps even greater—importance and value from a practical and therapeutic standpoint, and which could as well be included, or even substituted. But even these few have a real bearing upon a successful conception of the disease, and I trust I may convey them in a manner to emphasize their significance.

Before doing so, however, I would digress a moment in order to call attention to a popular misnomer (emphasized by Stengel): the term “chronic endocarditis” is commonly used to describe either a compensated valvular defect as evidenced by heart murmurs, or a broken cardiac compensation with heart murmurs. The term is wrongly applied in both instances, because valvulitis in the sense of a chronic and progressive illness, does not exist—(save in the more unusual forms of chronic syphilitic infection). The compensated valvular defect, whose presence is demonstrated by the usual signs, is the result of a previous acute valve disease, and constitutes a healed valve deformity, not a continuing—or progressive—affection. Once healed, compensation takes

*Read at meeting of Alumni Assn., Univ. of Buffalo, June, 1917.

place, nor will it ever again—acting alone—give rise to symptoms unless there be an endocarditis engrafted upon it. Therefore it were well if we dismissed the erroneously used term “chronic endocarditis” when referring to defective but healed valves, and, in its place, speak of valvular defects, or simply of murmurs, or single out the particular name and character of valvular abnormality.

The mechanics of the circulation, or its physiology, must be appreciated in order to properly estimate its pathology. The essential elements in the maintenance of normal circulation are: 1. The propelling or driving power of the heart; 2. The condition of the arteries and arterioles; 3. The vasomotor mechanism, particularly in so far as it pertains to the splanchnic circulation, and controls the mass movement of the blood.

1. **The Propelling Power of the Heart.** We may consider it a fundamental fact that the functioning capacity of a heart is measured by its muscle, not its valves, and that upon the integrity of the heart muscle and its ability to adapt itself to varying conditions, rests the big burden of maintaining a proper equilibrium. In order to prove equal to unusual demands which an exacting economy makes, the heart muscle is compelled to, and does, become hypertrophied. In this manner compensation is developed in healing valvular lesions, and in cases in which excessive strain—through unusual physical effort—is put upon the heart. The opinion is often expressed that the body harboring such a heart is as safely insured against damage from this source as is one whose heart's integrity has never been questioned. This is an erroneous idea. True, the hypertrophy that has developed does not necessarily reduce the heart's ability to take up and satisfactorily carry the burden of the body's physical activity, under ordinary conditions. There is a limit to hypertrophy, however, and even when it is considerable the power that can be developed is never so largely in excess of that ordinarily required as in a normal heart. The reserve power of such a heart is reduced, and what Mackenzie calls the “field of response” is therefore limited. When confronted with unusual demands this hypertrophy has frequently proven a blind, and disaster has been the inevitable consequence. Such, per example, is the case of the athlete whose heart, through long education, suits its action to its master's bidding; it becomes hypertrophied, responds to every demand, and makes its owner happy in a consciousness of strength. But an unwonted acute demand, whether in the shape of a physical effort, or a mild or severe infection, or shock, has in many an instance easily broken down this com-

pensation, the first line of defense found defective, the much needed mainstay been proven a disastrous disappointment.

We must at all times bear in mind that, inasmuch as it is the heart muscle's hypertrophy that makes possible a symptomatic recovery from a valvular defect, this equilibrium can be maintained only so long as the muscle's integrity is maintained. Therefore, when symptoms of broken compensation arise in such a case, they do so as a result of muscle—not valve—decompensation. I believe this distinction worthy of emphasis because we have been too prone to consider the valve defect as the object of our solicitude, rather than the muscle disabled as a result of that defect. While this analysis may seem to have but an academic value, in reality its proper recognition has a direct bearing upon our therapy, and merits greater attention in text book essays than has hitherto been accorded it.

2. **Arterial or Arteriole Disease** is very commonly the barrier upon which the heart vents itself in vain, and to which effort, having spent itself, it finally succumbs. We are, in the one instance, dealing with a heart compensated against a valvular defect acquired in early life or in adolescence, and permitting its possessor the enjoyment of perfect health and activity. But with the advent of middle life arterio-sclerotic changes supervene, and the situation at once becomes critical; the inelasticity of the blood vessels offers greater resistance, the heart is overtaxed, and dilatation gradually develops. Or, we may be dealing with a heart that has had to overcome frequent onslaughts in the nature of splanchnic engorgements or mesenteric sclerosis. And lastly, but most important of all, chronic renal disease gives rise to high tension, arterial degeneration, and eventually cardiac disease, with the same disastrous consequences.

3. **The Vasomotor Mechanism** plays a vital part in the maintenance of vascular equilibrium. The splanchnic circulation being the "largest vascular field in the body," is therefore most concerned in vasomotor influences, and, when disturbed, may affect the circulatory equilibrium. This is a factor in all processes of digestion, in the engorgement which may follow overfeeding, and affects particularly the middle aged and those of sedentary habit. Anginoid attacks are common in these, and especially in the overfed type of individual with large and pendulous abdomen.

Hypertension. Allbutt claims that arterial disease is not the cause of elevated blood pressure, but its results; that high pressure cannot be long maintained without arterial strain, and that "arterio-sclerosis results from long persisting

high blood pressure from whatsoever origin." The causes of high pressure are, in individual cases, obscure. Toxemia, renal disease, gout, and other metabolic errors, possibly adrenalin excretion, and poisons, play a part. In elderly people the blood pressure may be elevated without evidence of renal or other disease. Under the term "Nephritic Hypertension" we refer to the cases of chronic Bright's with hypertension. When renal disease does **not** exist, an intoxication of obscure origin is probably the exciting cause producing increased peripheral resistance and elevation of blood pressure. This is the type of "Essential Hypertension" which may persist for years with no sign of nephritis or with only occasional slight albumenuria. But these, I think, in many instances, are linked with and develop into the nephritic hypertension cases, and when very persistent—often and finally succumb to a uremia. I am wont to consider all persistent high tension cases as **potential** chronic nephritics.

The fallacy of making Arterio-Sclerosis and Hypertension synonymous terms and conditions, is still common enough to warrant mention. It is to be remembered that there may be marked beading of the arteries without hypertension, and soft arteries with high tension. It is rather difficult to reconcile this with Allbutt's statement that high tension precedes—that is—causes arterio-sclerosis, unless one were willing to concede that primarily high tension existed in all cases, as the result of a toxemia, and that—after arterio-sclerosis had developed—the tension became reduced on the basis of Muenzer's theory of the causation of hypotension in arterio-sclerosis; "the blood flows through the large blood vessels as does a fluid through an unyielding tube; there being no periodic distension of the vessel wall, the tension is lowered." (Goodman, *Am. J. Med. Sc.* April 1914).

Far more serious than the cases of marked hardening of the superficial arteries—with or without symptoms, are the cases of hypertension in those of soft arteries. In the latter this disease is dangerous, because it is insidious, and does not incapacitate. In this class are men and women of middle life and of portly frame; men of responsibility, women with large families. These patients look healthy, their radials are soft, temporals not hardened; arcus senilis is present, their hearts somewhat enlarged, systolic pressure as high as 200 to 250, second aortic accentuated. Riesman (*Am. J. Med. Sc.* 1913, p. 487) considers the finding of a systolic aortic murmur in these cases of prognostic import; that it means sclerosis of the aorta and coronaries, and therefore indicates a greater tendency to the development of angina pectoris. As a matter of fact, these high pressure cases—without visible

or palpable arterio-sclerosis, are particularly prone to this serious outcome.

Significance of Systolic and Diastolic Pressure. The Systolic pressure can best be described as the indicator of the force of the ventricular contraction of the heart; the Diastolic as the indicator of the amount of peripheral resistance in the arterial system. The difference between these two is the Pulse Pressure—the excess force the heart exerts over the peripheral resistance—or the amount of pressure which carries on the circulation—or, put in other words, that part of the heart's energy which produces the distension of the arteries and is recognized as the pulse. The systolic and pulse pressure readings represent myocardial values, the diastolic arterial resistance. Therefore, the systolic reading alone, while of value, is misleading unless checked up with the diastolic.

When may there be considered to exist a normal balance between the systolic and diastolic pressures? According to authorities, the pulse pressure is normally approximately 35% of the systolic, or 50% of the diastolic reading. Marked deviations from these figures suggest a tendency to—or already the presence of—a lack of balance between heart muscle and peripheral circulation. In an effort to properly interpret the clinical significance of these phenomena, W. J. Stone (J. A. M. A., Oct. 1913) has suggested the use of a formula expressed by the pulse pressure divided by the diastolic pressure as indicating the cardiac load and “overload.” The more nearly the pulse pressure approaches the diastolic in a case of myocardial disease, the greater is the danger of impending muscle insufficiency. The systolic pressure in this instance is relatively high, and therefore indicates excessive effort on the part of the heart, resulting in overstrain. On the other hand, where the pulse pressure is low, because the diastolic is increased, this excess of peripheral pressure threatens greater danger from cerebral accident.

It is necessary to emphasize this subject because, despite the insistence of recent writers, there is still manifest a great disinclination to deal with any but the systolic reading.

Shall Hypertension be Treated? It must be borne in mind that a high blood pressure is such in a relative sense only, and that not all high pressures demand lowering. In fact, a high blood pressure is undoubtedly frequently a compensatory—therefore conservative phenomenon, a measure of defense, not a destructive process, and is part of a balanced system, just as the hypertrophied heart is an expression of balance—an insurance against accident. Therefore, the administration of vasodilators in all cases of high tension is not

only an act of folly, but a positively dangerous practice, and in instances may lead to disaster. When it does produce symptoms, it may be reduced to a point where these symptoms cease, and not beyond. Many persons with moderate hypertension have disturbing symptoms, while many with high tension are thoroughly comfortable. Persons of good muscle development and active habit are better able to withstand a hypertension than are the obese and sluggish.

Symptoms. Among the **early** symptoms of cardiac distress may be enumerated: dyspnea, cough, palpitation, anginoid pain, slight oedema of the legs, gastro-intestinal disturbance, epistaxis, vertigo, faintness, headache, insomnia, tingling and numbness, ringing in the ears, and nocturnal polyuria. I emphasize these symptoms because they are not the severe ones of cardiac decompensation, and because, being mild, their proper interpretation may, in instances, be overlooked. A complaint of polyuria, especially nocturnal, with severe headache, or eye disturbances, in a patient below middle age with high blood pressure, suggests an attack of uremia as imminent.

Among the symptoms enumerated, I would particularly emphasize that of dyspnoea. It has been stated "that myocardial insufficiency can be expressed in terms of dyspnea; that where there is complete balance between pulmonary and systemic circulation dyspnea is absent on exertion; where incomplete balance, dyspnea occurs upon slight exertion; where the myocardium is insufficient dyspnea occurs even when at rest, and is exacerbated by the slightest exertion, such as talking or eating." Too much emphasis cannot be placed upon this one symptom—as an indicator of returning heart capacity. It is extremely difficult to appeal to a patient in terms that are purely medical, and that consequently have no meaning to him. To warn him against an excess because his pulse is arrhythmic or too rapid, or because of slight precordial pressure or cough, is frequently an unconvincing argument, and fails to strike home. But by compelling him to recognize that in dyspnea he has an admonishing symptom that is real, that is a tangible flag of distress of which he himself is even more cognizant than his physician. I have found myself able to more easily curb the convalescent's impatience, and guide him to a safer conduct.

Case History. In order to present a concrete example illustrating the compensatory nature of high pressure, and the fallacy, as well as danger, of interpreting cardiac conditions by the systolic reading alone, I wish to cite in some detail the case of Mr. H. S., aged 63, who has been under my observation many years. During the past winter he had oc-

casation to visit northern Michigan. A heavy snow-drift stalled his automobile, and he gave a willing hand to his chauffeur in an effort to push the car through the drift. Unsuccessful, he walked to the nearest town—a distance of three miles—for help, and arrived there in an exhausted state, complaining of heart palpitation and dyspnoea. He called a physician who saw him twice, and expressed his satisfaction that the patient's blood pressure (systolic) of 140 showed a good heart despite the arrhythmia present. A day's rest improved him slightly, and he left for a neighboring city. Symptoms of cardiac distress again arose. Another physician was called, and again favorable comment was made, because of a systolic blood pressure reading of 130. Experiencing no improvement he left for his home where I saw him on the following day. He was exhausted, dyspneic, suffered precordial distress, heart's action was arrhythmic, systolic pressure 130, diastolic 105, giving a pulse pressure of 25. The systolic pressure soon fell to 110, and with this there were marked arrhythmia and distress upon the slightest exertion. Improvement in symptoms came with a gradually rising systolic pressure, and when this, after many weeks, finally reached 150, and then 165, the patient felt himself reasonably well, and remains so at present writing.

Now let me trace back this patient's history for a few significant facts. In 1910 a trace of albumen, and a few hyaline casts were found in the urine, and slight dyspnea upon exertion was complained of. The urinary findings disappeared, nor to my knowledge did they reappear during a five year period following, although he doubtless was during all this time a latent nephritic, or—we may say—he was suffering from a potential interstitial nephritis.

He presented himself for examination from time to time, rather from a sense of precaution, then because of symptoms. His systolic pressure fluctuated between 160 and 180, the diastolic between 100 and 120, with usually a reasonably normal pulse pressure. Compensation had thus been fully established, and maintained during a period of more than six years, between the driving power of the heart and the peripheral resistance it had to overcome—in other words—the circulation had become equalized. An obscure infection supervened in 1915, followed by a prostatic abscess. Definite signs of chronic nephritis developed, and later uremic symptoms, from which he eventually recovered completely. He remained well until the occurrence of acute cardiac breakdown described above. The long persistent hypertension suggests this to be a case of essential hypertension only; yet when a complication ensued, uremia developed. And now he

is again—symptomatically—purely a case of essential hypertension.

Deduction of the physicians who saw him at this time was erroneous in that they made their systolic reading of between 130 and 140 the basis of the opinion that the heart was functioning well; whereas, had the diastolic reading been made as well, and the reduced pulse pressure noted, an acute lowering of the established equilibrium would have been seen, and the acute cardiac breakdown recognized. The systolic pressure of 130 or lower was wholly inadequate for the actual needs of this man of 63, and my insistence that he would not be considered recovered until it had reached its former level of 160 to 170 proved fully justified by the later development.

I believe that clinical facts warrant the generalization that in an individual 55 to 60 years of age, a systolic pressure reading of 140 or under is suspicious of a weak heart muscle, and may indicate the actual case of indefinite symptoms of distress, irrespective of the heart's sounds and rhythm.

Treatment. It would take me too far afield were I to distinguish—for the sake of therapy—carefully between cardio, cardio-renal and cardio-arterio-renal disease, because the general rules that may be laid down apply to all, although careful analysis of the individual case will, of course, determine the particular procedure. Treatment varies as to 1) the Stage of Compensation; and 2) Stage of Decompensation.

In the Stage of Compensation every effort must be bent to avoid an unnecessarily early decompensation. The heart must be safeguarded against overstrain. Moderate, but regulated exercise should be encouraged; overindulgence in food and drink discouraged, and all excesses avoided. The diet should not be too liberal, and if obesity exists, should be curtailed or properly selected. The confirmed arterio-sclerotic, that is—cardio-renal patient, should have a low protein diet, and should by a careful regulation of the bowels studiously avoid splanchnic congestion. He is to avoid physical fatigue, but is to indulge in exercise to the limit of his capacity, and must particularly shun anything that may cause undue mental strain. He should preferably have an occupation, but ought to adjust his work so that it can be conducted without unnecessary cardio-vascular strain. Aside from this—hydrotherapy may be useful, and drugs may be symptomatically used.

In the Stage of Decompensation, one's attention is first directed to the very effectual first line of defense provided in the body for this emergency in the **Conservative Action of the Liver and Spleen**. These two organs are capable of

enormous distension, and where cardiac over-dilatation threatens, will provide a ready outlet for the blood which would otherwise cause a rapid and fatal overdilatation of the heart. The engorgement of the liver, therefore, in cases of decompensation, is not an unwelcome sign. As compensation is again restored this enlargement subsides, and the organ contracts to its normal size. Repeated liver engorgements, if acute, may take place, and recovery follow. With the advent of long standing or permanent decompensation, the hepatic hyperaemia leads to a low grade inflammation, and eventual secondary induration, with resultant permanent enlargement. This passively engorged, sclerotic liver (*Stauungs Leber*)—once developed—is in itself a reasonably good record of the patient's cardiac history.

Briefly summarized among the measures of relief in broken compensation are:

1. **Rest**—absolute and prolonged—the first essential in every form of decompensation. Later, the heart's response to exercise, and presence or absence of dyspnea, are good indicators of its improved function.

2. **Digitalis**, when given in the usual therapeutic dose, does not increase blood pressure, and may be safely given in all cardiac breakdowns. It will often be found useful in small tonic doses, even when systolic tension is high.

3. **Opium** is of inestimable value, and is indispensable in most cases of broken compensation. When combined with digitalis, the latter often has an effect which it cannot produce acting alone.

4. **Diet** may reduce high pressure and relieve symptoms due to hypertension. In cases of decompensation with dropsy, with a pulse of fair volume, the Karrel-Kur—(1 quart of milk daily in divided doses, without the addition of other food or drink) is frequently followed by a startlingly quick cardiac response, and an early subsidence of the dropsy.

5. **Depletion** by calomel, blue mass, or other cathartics, is often called for, before digitalis can make an impression upon the disabled heart, because the mass movement of blood gives rise to splanchnic engorgement, thus creating an impediment to the circulation.

6. **Venesection** in high tension with symptoms is a remedy of no mean value. An acutely oncoming epistaxis has often prevented a cerebral accident; we can do likewise with our lancet, and should resort to it more frequently than is our custom.

7. **Vasodilators** I place at the lowest rung in this therapeutic ladder, because—while in very common use—their

reputation for service has exceeded their efficiency. They are not heart tonics, and are only to be given where high pressure head symptoms are present, or anginoid attacks exist or threaten; here the vasodilators are indispensable and will often act promptly and excellently, but their action does not extend beyond symptomatic relief, and is very evanescent. When nitro-glycerine fails, it may be because too small a dose is given. Several doses, repeated at very brief intervals may give speedy relief, where the usual small dose fails. Thyroid Extract, while frequently not reducing the tension, will give marked symptomatic relief. I have found it particularly useful in allaying distressing tinnitus and dizziness.

8. Other measures—stimulants, sedatives, and diuretics, are useful also, but those mentioned I consider of prime importance, indispensable in cardiac breakdowns, whether of the acute—or cardio-renal type.

It were gratifying did one feel warranted in asserting that high tension patients—if only their pulse pressures are relatively normal—are in no danger of accident. Experience has taught us to fear these cases, more especially because their resistance is constantly below par, and because they are potential nephritics.

I have thus sketched—under a few chapter headings—disconnectedly to be sure—and necessarily merely in rough outline—a few items that are pertinent to the big subject of arterio-cardio-renal disease. Our knowledge of them is still limited, our therapy halting and uncertain, and its results inconclusive. Despite this—good judgment and advice on our part, and an infinite amount of patience and co-operation on the part of the invalid, will add to his comfort and prolong his usefulness.

Examination for Tubercle Bacilli in Sputum Liquified by Pyridine. Marthe Giraud and E. Derrien, Soc. de Biol., Nov. 18, 1916, recommend the following procedure for tenacious sputum: Add 15 c.c. of pyridine to 10 c.c. of sputum, mix thoroughly and let stand 5-10 minutes till liquification takes place, although no harm results from longer contact. Centrifuge and examine the sediment as usual. They claim that this method is less "brutal" than that by hypochlorite and heat. (By the way, the word brutal in French, is sometimes used for various experiments, especially on animals in a way that may mislead kind-hearted persons. It applies to the scientific side of an experiment and means crude, or lacking in delicacy).

A Resume of Things Concerning the Medical Officers'**Training Camp at Fort Benjamin Harrison.**

By SAMUEL E. EARP, M. D., Indianapolis,

Editor Indianapolis Medical Journal.

At the gates of Indianapolis is situated Fort Benjamin Harrison, one of the training camps for officers of the United States Army. There is a post hospital of one hundred beds, and all else that goes with such an institution, including accessory camps for the care of those affected with contagious diseases. There is an infirmary sick call at 4 p. m. each day those sick are transferred to the hospital. The barracks will accommodate nearly a thousand medical officers and is lighted by electricity. The mess is unusually good, but in this, like some other things, a few cents extra will take to the extreme, which is unnecessary. Lectures and quizzes are conducted under trees, and blackboard exercises are in evidence, and thus the instructors find out what has been accomplished during study and drill hours.

Recreation consists of all kinds of athletic and other games. Entertainments are of the best. The governors of several states have delivered lectures, and Senator James Watson and a number of others of equal rank in Washington, have done their bit. None excel instruction, advice, and words of truth that are given by Brigadier-General Edwin F. Glenn. Enthusiasm is at high pitch, co-operation is of the best and discipline is of a superior quality.

At the post there are now 13,000 men. Through the courtesy of Major Percy M. Ashburn, I obtained information which is authentic. The morning that I visited the post, July 23, in the interest of the Buffalo Medical Journal, the written morning report shown me gave the number of men in the medical training camp as 2842. There are four field hospitals of 80 men, four ambulance companies of 150 men, one evacuation hospital of 180 men, 20 regimental attachments and 33 men in sanitary squad. In addition there is one Indiana Field Hospital of the Indiana National Guard, one ambulance company of the Indiana National Guard, and 400 enlisted men from different states.

The brain and body work of the student officers commences at 7 a. m. and continues until 5 p. m. The work is divided into three parts: 1st month experience of enlisted men and learning duties in medical department; 2nd month, officers' duties, and 3rd month includes both 1st and 2nd.

The best men adapted to particular service are recommended for advancement by Major Ashburn, and the appointment is made at Washington.

There is a parade and review each day but the student medical officers have had but one review, and that was when Governor Cox of Ohio visited the post.

Those who have left the camp had some physical disability and none for inefficiency. This is surely creditable to a superlative degree. In line of duty 100 have gone elsewhere, 75 abroad, (and we know what that means), and 35 assigned to duty as instructors at other camps. These facts until now were unpublished.

Incidentally, it might be said that the student medical officers have no gun practice but they do have hikes of six miles a day, two or three hours of drill, and special drill in ambulance duties and other medical work. The men get the best food and water. Two new filter-beds were put in this week and there are deep wells that reach below the blue glacial clay, which means the second stream of water. There are no 30 feet surface wells.

Saloons and houses of prostitution are not permitted nearer than five miles from the camp. There is one exception, if a saloon man had his license before the adoption of this rule it would not exclude him if the saloon was located one-half mile from the post, but no liquor is allowed at the post, no lewd women, and soldiers cannot be given liquor when in uniform during a visit to the city when off duty. Anyone giving liquor to soldiers is subject to arrest and imprisonment upon conviction.

There have been no cases of alcoholism at the post and at this writing no known case of venereal disease. This undoubtedly is a creditable record.

A word about court-martial. A captain of the Spanish-American War, Dr. Eugene Buehler, and business manager of the Indianapolis Medical Journal, and who accompanied me to the post, said: "We had a case of court-martial almost every day." Major Ashburn who heard the remark replied: "This post opened June 1st and we have had two trials only, both for absence without permission."

Many of the student officers are college students or graduates, and those who compose this camp are of the highest quality and the best character.

The officers of the medical training camp are: Major Percy M. Ashburn, chief officer; Major J. R. Shook, Major G. H. Scott and Majors Morse and Powell. Those of the rank of captain are: Captains Snyder, MacCormack, Druly, Bastian, Creighton and Turnbull.

The men of the camp co-operate perfectly with these officers and they are held in the highest esteem. Fort Benjamin Harrison is a great camp for good and those who go forth from it will be an integral part in the successful termination of the world's war.

634 Occidental Building, Indianapolis, Ind.

P. S. The editor acknowledges the great courtesy of his colleague in preparing this article. Various questions have been asked by those expecting to be ordered to this camp. Dr. Earp answers them as follows: Some men bring a trunk and suit case and dispose of such baggage and containers as are not needed. The general order during war is against the use of civilian clothing at any time. Some have brought autos and get time to use them when on leave of absence, especially parts of Saturdays and Sundays. Those who have contemplated traveling to camp by auto and selling it on leaving, must expect to do so at considerable loss. General orders are that medical reserve officers should equip themselves with uniform, cot, bedding, etc., in advance, as stated in bulletins and lists issued by the Surgeon General, but as compliance with this order is in some cases impracticable, quite a few wait till they reach Indianapolis before securing equipment and some until they actually arrive at camp. Major Ashburn's remark about court martials indicates that the omission is not considered serious, although all should equip themselves so far as possible.

Anatomic Localization of Projectiles in the Posterior Aspect of the Heart. René Le Fort, *Le Progres Med.*, June 2, has had an experience with 25 cases. Radiology gives valuable but often incomplete assistance and the surgeon must expose sufficiently to complete the diagnosis. In one case, a ball had remained in the posterior wall of the right ventricle for 30 months. Complete cardiac symphysis prevented the use of the posterior wall of the heart up to the esophagus, separate adhesions from the rear forward, penetrate the cardiac wall and disengage the firmly imbedded ball. In another case, the extreme movability of a shrapnel bullet behind the pericardium prevented its seizure. The pericardium was then incised in front of the phrenic nerve and the ball was slid up to the oesophagus and held in place by the fingers while it was extracted through a second button-hole opening. In seven cases, one with the ball lodged in the posterior wall of the heart, six just behind it, the mortality was zero.

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The Two Narcotic Laws.

There are laws against arson, adequate and fairly well enforced. On the whole, we are inclined to think that fires are as few and incendiaries as frequently apprehended as if we had a law that required a license for the sale or possession of matches, kerosene, cans that might presumably be used to hold kerosene, etc., and that made it necessary for every one using such articles, however, innocently, pay a tax, have an annual license, and to purchase, sell or give away such articles, through the medium of special blanks. Moreover, we incline strongly to the belief that there would be no diminution in fires if a board who had never seen a fire, were empowered to rule that vaseline was kerosene, that cold cream was not, and that crinoline was subject to the regulations as to purchase, sale and use, because the word sounded like kerosene. By analogy, we would expect such a board to rule that a licensee who arranged kindling and coal in a stove and touched the kindling with a match, started a fire personally when he did it in somebody else's house but did not personally do so when he performed the same feat at home.

However, opinions differ in regard to the best means of attaining an end and, we may grant that the best way of eliminating indulgence in narcotics is not to get after the addict nor to use the honest physician as a trusted assistant of the law, but to tag the individual pill and spoonful and tax the physician, druggist and every one else concerned. With this assumption, both the nation and the state have sat-

isfactory laws on the subject—with certain minor qualifications. For instance, as our country is at present organized, the nation had no right to legislate at all with regard to local practice but it got around this little constitutional provision by imposing a tax. There was no good reason or precedent for imposing a tax of this sort, any more than for imposing a tax on any other legitimate business, under such circumstances that practically every one in the business would be compelled to pay it and that no considerable benefit could be derived in the way of revenue. A quite incidental objection followed, that the law like most laws which do not apply to obvious crimes, but which are artefacts of a complicated civilization, had to be interpreted. The interpretation of the law was left to an office force, unquestionably well disposed, conscientious and generally well informed but not technically trained in pharmacology. Inevitably, some of the interpretations, as in that apomorphine was a habit-producing narcotic and that the direct administration of a drug by a physician to a patient was personal attendance at the residence of the patient and not personal attendance at the physician's office, were at variance with ordinary professional judgment. One is reminded of the ruling of an English guard with regard to the status of pets carried on trains: "Cats are dogs; parrots are chickens; turtles are insects and travel free."

Very gradually, the law is being interpreted in conformity with facts and it is not being enforced or punishment meted out, on purely technical points. Backed by a really efficient detective effort to get at actual violations of the spirit of the law, in other words, by carrying the general principles of compulsory reform as against crime and malpractice in general, the law is being enforced as well as if it had not been enacted in its present form at all. In addition, the checking and counterchecking of narcotics certainly has rendered them much less easy of access—to such a degree in fact that many have committed suicide and a good many addicts and those suffering temporary pain, have suffered for lack of narcotics.

It may seem like pure contrariness to object to the national interference in local matters and then to object to the state's virtually duplicating the national narcotic law, and further to object because the duplication is not exact. Practically, however, it would have simplified matters if the state had either omitted or repealed all legislation on the matter, or had merely endorsed the action of the national government or, if a state law had to be passed, to have made the duplication exact.

Some physicians have gone so far as to declare that they

would cut the Gordian knot by dropping narcotics altogether and letting patients suffer. But even so radical a course is impracticable, quite aside from the occasional necessity of using narcotics. Without a license, the physician has not even the privilege of turning his stock of narcotics—including some rather harmless samples—over to a hospital or of destroying them. He will be surprised to find that some proprietary drug that he uses or that is pressed upon him by an agent, contains a narcotic, or that some ruling classifies as a narcotic some synthetic drug which he does not conceive to be so. At any rate, it is cheaper to pay the two dollar taxes than to be investigated as a suspect. July 1 is the time for registering, paying the fees and filing an inventory. A reasonable, innocent delay will probably be overlooked. A copy of the inventory, the licenses themselves and copies or memoranda of all prescriptions or administrations of any drug that can possibly be considered a narcotic, should be kept. Purchases of drugs require special blanks but any misunderstanding of the law as regards prescriptions for patients or for purchase for dispensing, will probably be corrected by druggists. However, the laws should be diligently studied and saved for reference.

Red Tape and Efficiency.

As many physicians will enter government service, let us say a few words about the above topics. Any of us could take a position as president or manager or superintendent of a large business. On the first day of our new duties, we would discover a great many unnecessary, complicated and time and money-consuming methods. The elimination of these methods and the substitution of simple and practical ones would at once occur to us. But, at the end of a few months, the business would probably be in the same condition as a patient with pericarditis or appendiceal abscess if treated by the person whose place we took. Red tape means the business methods of government. It has been developed very gradually by men of long experience, mainly of ability and conscientiously devoted to their profession. It is ultimately intended to protect the stock holders who are the people. An army surgeon who, as a young man, was a clerk in an administrative department of a railroad, declares that the business forms and system of the Surgeon General's office and of the entire medical corps are far simpler and far more efficient than those of any railroad in the country.

As to efficiency, remember that it depends largely on learn-

ing the real nature of a new line of work. Don't be like the type-writer manufacturers who advertise a medical keyboard on the strength of drachm, ounce and scruple signs. On the other hand, don't be too critical if you encounter survivals of the past encumbering 20th century methods. Even the scruple has not entirely disappeared from medical writings.

Surgical Bunglers.

This is the title of an abstract of Dr. Arthur Dean Bevan's paper before the A. M. A., appearing in the Sun of N. Y. and repeated in the Buffalo Express and, doubtless, many other newspapers. The sub-title is also worth considering—"Too many operations by unskilled practitioners." A paper of this sort is proper and timely, just as proper and timely, for example, as one entitled "Neglect of Internal Medical Assistance by Operators," "Why is the Inexperienced General Practitioner Attempting Operations," "Where and How can the Man with Surgical Ambitions, Secure Adequate Clinical Training," "Better Doctoring for Less Money." There are all sorts of issues implying that the medical profession has not attained the ideal solution of a problem. The fact that such issues exist and proposed remedies ought to be put before the profession but there ought to be some practical method, an executive session, for instance, that would prevent their undue publicity. Such publicity leads to exaggerated notions of medical imperfections, hampers the influence of the profession in securing needed legislation even on matters entirely unassociated with the one discussed, gives a leverage to quacks of all kinds. There is also an ethical question involved which may best be illustrated by pointing out, with no intent of discourtesy, the immediate lay interpretation of the article mentioned. Put yourself in the position of the average lay reader of this particular article; you will infer from it, two things: 1. That Arthur Dean Bevan is a competent surgeon, a perfectly correct inference but one which ought not to be promulgated through the lay press; 2. That Drs. Smith, Jones, Robinson and others, one of whom is your family doctor and the others whom you know more or less well and favorably, socially or by reputation are at least subject to serious questions as to competency, an inference which may be correct in some cases but which is extremely unjust in others. When, as a physician, you have considered the effect of lay publicity to such articles, you will appreciate our contention for some adaptation of the

principle of executive session, to all discussions that call into question the ability or integrity of the profession.

BOOK REVIEWS

Books mentioned may be inspected at and ordered through this office. So far as possible, books received in any month will be reviewed in the issue of the second month following. Pamphlets, quarterly and similar periodicals, reports, transactions, etc., will, as a rule, merely be mentioned.

1916 Collected Papers of the Mayo Clinic, Rochester, Minn. Octavo of 1014 pages, 411 illustrations. Philadelphia and London: W. B. Saunders Company, 1917. Cloth \$6.50 net; Half Morocco \$8.50 net.

This contains a series of articles on the stomach—gastric and duodenal ulcer, ordinarily so called, toxic gastric haemorrhage, duodenal ulcer with achlorhydria (free HCl absent) spasm of stomach and duodenum (X-ray studies), influence of gastric juice on jejunal mucosa, gastric ulcers following removal of adrenals, syphilis, tuberculosis, cancer, legitimate error in X-ray studies, etc. Several other articles relate to the biliary passages and the intestine. The uro-genital organs, ductless glands, blood, non-visceral surgery, pathologic and surgical technic and a section that is described as general, complete the work which is well indexed and provided with elaborate bibliographies. A book of such large size, covering many different subjects and mainly consisting of monographs of the utmost value, is obviously difficult to review satisfactorily. Its interest is by no means confined to surgeons.

Practical Treatment, Volume IV. By 76 eminent specialists. Edited by John H. Musser, Jr., M. D., Associate in Medicine, University of Pennsylvania; and Thomas C. Kelly, M. D., Instructor in University of Pennsylvania. Desk Index to the complete set of four volumes sent with this volume. Octavo 1000 pages, illustrated. Philadelphia and London: W. B. Saunders Company, 1917. Cloth, \$7.00 net; Half Morocco, \$8.50 net.

The present volume and index complete the work which was begun several years ago. Vol. 4 includes a general section, in which are articles on governmental prophylaxis, general principles of drug treatment, vaccines and sera, hydrology, Climatology, electrotherapy, Roentgen therapy,

food and drug poisoning and poisoning by reptiles and insects, etc. The general sections following are devoted to infectious diseases, parasites, circulatory, respiratory, digestive, urinary and nervous systems (no distinction between system and apparatus), and constitutional diseases, a term that we are still unable to discontinue. It will be noted that this work is far beyond the ordinary alphabetic arrangement of brief and inadequate therapeutic measures and that it is more in line with reviews of periodic literature but with less strict time limits and freer scope to the authors of the various sections. While properly designated as a work on treatment, and of practical nature, neither term has been interpreted in a narrow sense. It is really a series of monographs, each as up-to-date and complete as possible and the only criticism that can be made is that, in a work of this volume and high aim, it is impossible to crystalize a progressive art and science or even to bring out at once, the entire assemblage of data representing the point reached by medical science at any given date. These impossibilities are inherent and inevitable and in no way detract from the usefulness of the work.

The Elements of the Science of Nutrition. By Graham Lusk, Ph. D., Sc. D., F. R. S., (Edin.), Professor of Physiology at Cornell Medical School, New York. Third Edition, Reset. Octavo of 641 pages, illustrated. Philadelphia and London: W. B. Saunders Company, 1917. Cloth \$4.50 net.

This work deals with the physiologic and chemic principles on which dietetics rests and should be read as a foundation for the clinical direction of feeding, just as physiology, chemistry and pathology should be studied as a basis for intelligent therapeutics in general. The scope of the work can be judged from the titles of some of the chapters: Respiration Calorimeter, Starvation, Regulation of Temperature, N Equilibrium, Intermediary Metabolism and Respiratory Metabolism (Proteids), Influence of Ingestion of Fat, Intermediary and Respiratory Metabolism of Carbohydrates, Influence of Mechanical Work on Metabolism. The metabolism in various diseases is discussed in several chapters and a final chapter on food economics, though obviously not directly applicable under present abnormal conditions, is of great value.

Personal Reminiscences of the N. Y. Hospital, 1856-1900, Dr. Robert F. Weir, Attending Surgeon, 1876-1900, consulting surgeon thereafter, contained in the General Bulletin, pub-

lished by the Society of the N. Y. Hospital, Vol. 1, No. 10.

This is a valuable and interesting contribution to medical history.

Physical Exercises for Invalids and Convalescents. Edward H. Ochsner, B. S., M. D., Chicago, C. V. Mosby Co., St. Louis. 54 pages, 40 illustrations, \$0.75.

This is a series of mild exercises, not involving physical strain, and without apparatus of any kind. Each exercise is illustrated, an appropriate number of repetitions of the muscular movements is stated and directions as to control of posture are given. A work of this kind, far removed from athletics, aiming to correct defective carriage and to build up strength without over emphasizing muscular development, is adapted to many practical problems and should be generally used. It can be safely given to patients for instruction in details, the physician directing the general plan and degree of exercise and correcting faulty posture and failures to get the proper muscular swing.

Practical Materia Medica and Prescription Writing. Oscar W. Bethea, M. D., Ph. G., F. C. S., New Orleans, F. A. Davis Co., Philadelphia, 2d revised edition, 562 pages, \$4.50.

Rather more than half of the work is devoted to materia medica, following the alphabetic arrangement, a moderate number of unofficial remedies being included. Prescription writing is very thoroughly discussed, the tabulation of Latin terms and inflexions being especially convenient. Altogether too little attention is paid to metric prescribing. Incompatibility and solubility in water and alcohol and the medicolegal status of the prescription are well treated. The inclusion of fac similes of written prescriptions is an excellent point although it might be well to illustrate a greater variety of blanks and the use of the metric as well as the apothecary's system. An appendix devoted to discussions of prescription requirements, on the conference plan is especially valuable. An index of general indications for diseases gives a general idea of therapeutic applications.

Hand Book of Anatomy, James K. Young, M. D., F. A. C. S., Philadelphia, F. A. Davis Co., Philadelphia, 424 pages, 154 engravings, including colored plates. 5th revised edition, \$2.

The free use of tables, the great clearness of the illustrations and the skillful avoidance of unnecessary details and prolix descriptions are the answer to the question as to how a comparatively small book could give so comprehensive and thorough an idea of anatomy. We recommend this book especially to men entering military service, for which portability is a prime requisite.

Manual of the Diseases of the Eye, Charles H. May, M. D., N. Y., Wm. Wood & Co., N. Y., 442 pages, 377 original illustrations, including 22 plates and 71 colored figures. 9th edition, revised, \$2.50.

No better evidence of the value of this work can be given than the number of the edition and the fact that it has been translated into 7 foreign languages, including Japanese and Chinese. It is a thorough and accurate manual, not only abundantly and clearly but sensibly illustrated. That is to say, the illustrations follow the text and aid in comprehending statements and instructions in words and are not merely embellishments, more or less appropriate, as in some books.

The Medical Clinics of North America. Volume 1, Number 1, (The Johns Hopkins Hospital Number, July, 1917). Octavo of 193 pages, 14 illustrations. Philadelphia and London: W. B. Saunders Company, 1917. Published Bi-monthly. Price per year: Paper, \$10.00; Cloth, \$14.00.

We depart from our precedent in reviewing collective works, in specially mentioning Janeway's clinic on diabetes with associated failure of the external secretions of the pancreas, not only because of the intrinsic interest of the case but because it is a conference clinic, with inclusion of the report of a student, Mr. Rice, and the discussion as would naturally occur between attendant and consultant in the actual diagnosis and treatment of a difficult case.

TOPICS OF PUBLIC INTEREST

Revision of Rank for the Medical Dept., U. S. Army. Senator Owen presented an amendment July 20, providing in future for distribution of medical officers in the regular army, as follows: Major Generals and Brigadier Generals, each $\frac{1}{4}\%$ of total number of officers which shall be 7: 1000 men in the regular army and national guard; Colonels 4%;

Lt. Colonels 8%; Majors 23.5%; Captains and First Lieutenants, each 32%. The relative grades of the officers of the Medical Reserve Corps shall be the same as the grades of the Regular Army. According to one construction, this last provision seems rather too liberal, certainly if men who have given their entire lives to the regular service should be passed over and the highest ranks awarded to men only temporarily in the medical service. It will be noted that, with allowance for mortality, this amendment virtually assures every competent, surviving member of the Medical Corps, the rank of Major in due time without the long blocking of promotion by rapid diminution in number of higher positions, such as has prevailed in the past. With the Medical Corps on its ante-bellum scale, of something over 600, it would provide 3 generals of the two grades, instead of one of the lower grade. In this connection, it may be stated that the Surgeon General has regularly held the rank of Brigadier, Major General Gorgas owing his higher rank to his especially distinguished services in the sanitation of the Canal Zone. So far as can be judged at present, the total number of medical officers will be 10,000 within a few months, so that there will be 50 Generals, equally divided between the two ranks, instead of one for the entire Corps.

Air-Raid Mortality, London. During the first three years of the war, 366 death and 1,092 non-fatal casualties occurred. Meantime, 2,412 deaths and 7,863 injuries occurred from ordinary street accidents. Cities of N. Y. State, in 1915, reported an average of 13.2 deaths per 100,000 population, from street car, automobile and vehicular accidents, not to mention other causes included in the more general heading for London. As the London statistics apply to the Metropolitan area, with a population of over 7 million, it can readily be calculated that London, with air raids, is slightly safer than New York.

Centralization of Municipal Medical Work, Buffalo. The West Farm Hospital, to be opened soon with 1000 beds, the Ernest Wende (contagious) and the Municipal Hospital as well as the 5 city dispensaries have, by an ordinance recently adopted, been placed under a single board of control, with Dr. Walter S. Goodale, Superintendent of City Hospitals and Dispensaries. The ordinance provides for 5 city physicians and it is expected that the present incumbents will be continued. There are 140 other city employees connected with the hospitals and dispensaries. No radical change in the actual working of the units is contemplated.

The Mental Hygiene War Work Committee of the National Committee for Mental Hygiene is anxious to obtain the names of psychiatrists and neurologists who are willing to give part-time service in the examination of National Guard troops in their vicinity. The recent decision of the War Department to examine the National Guard troops in their armories before sending them to camp, makes it necessary to secure at once a large number of examining physicians. To meet the situation the Surgeon General of the Army has arranged to accept for this work qualified physicians on contract. A physician may contract for specified duty, at a specified place, for a specified time, or for part-time. This latter provision makes it possible for many physicians who cannot take out commissions, or who cannot give all of their time to the work for a period of months, to give part-time each week. Further information can be received from Dr. Frankwood E. Williams, Vice-Chairman of the Committee, 50 Union Square, New York City.

Bulletin. Dr. Pearce Bailey of New York, Chairman of the Committee on Furnishing Hospital Units for Nervous and Mental Disorders to the United States Government, a sub-committee of the National Committee for Mental Hygiene, has been invited by the Surgeon General of the United States Army to accept a commission as major and to come to Washington as personal advisor to the Surgeon General in all matters pertaining to psychiatry and neurology. Major Bailey is now on duty in the Surgeon General's office. Dr. Frankwood E. Williams, Associate Medical Director of the National Committee for Mental Hygiene, has been appointed Vice-Chairman of the committee and placed in charge of the work in the New York office.

Increase in Longevity. Wm. H. Davis, Chief Statistician of the Dept. of the Census has kindly furnished the following statistics:

U. S., practically the entire white population (Meech) 1830, 1840, 1850, 1860, average life of males, 41.01 years; of females, 42.91.

U. S., registration states, white and colored, 1901, males, 47.88; females, 50.70.

U. S., registration states, white and colored, 1910, males, 49.86; females, 53.24.

Massachusetts, entire population, 1890, males, 42.50; females, 44.46.

Massachusetts, entire population, 1901, males, 46.07; females, 49.42.

Massachusetts, entire population, 1910, males, 49.33; females, 53.06.

The close agreement between national and state statistics is corroborative of the real optimistic significance of the figures and the contrast with the statistics 1830-1860 minimizes somewhat the improvement, on account of the inclusion in the more recent statistics of the various non-Caucasian races. It may be inferred that there was no notable gain from 1830 to 1860 so that it may be concluded that the longevity was the best that could be expected without definite scientific control of sanitation and marked therapeutic advances. The improvement subsequently noted is progressive and has occurred in spite of a gradual increase in density of population which, without counterbalancing favorable factors, would certainly have resulted in decreased average longevity. It is significant that the longevity of females exceeds that of males, throughout, in spite of well known physical sexual handicaps. With due allowance for the probable influence of average better behavior of the female sex, we think this must be regarded as a practical result of chivalry. From the standpoint of the medical profession, it is particularly gratifying to note that the average longevity of females has been increased by over ten years between 1860 and 1910 and that the longevity of males has been increased by less than nine years. This difference can not be attributed to infancy and early childhood, when the sexual differences are of practically no importance, nor to general improvement of sanitary and living conditions. It may fairly be claimed that it is due mainly to actual advance in therapeutics, and probably very largely along the lines of obstetrics and gynaecology.

The National Board of Medical Examiners, Dr. J. S. Rodman, Sec., Philadelphia, reports that 12 candidates were examined in Washington, June 13-21, of whom 9 passed and are therefore, eligible to appointment to the regular Medical Depts. of the Army and Navy, without further professional examination. 12 other candidates were eligible but were prevented from being examined by active military service. The next examination will be held in Chicago, Oct. 10-18, and there will be an examination in N. Y. early in Dec.

Narcotic Drugs. It is obvious that, especially among the newer synthetics and proprietary compounds known by more or less suggestive names, there are some drugs which relieve pain which are not in any sense habit-forming or dangerous and which therefore do not come within the application of

the law while there are others which are mere mixtures of narcotics or which contain as one or the sole ingredient, a slight chemie modification of an officinal narcotic and which, therefore, are subject to the law in all respects. We have to secure from the national and the state authorities, lists of drugs as to which this question might arise, distinguishing between those coming within the scope of the law or beyond its jurisdiction. Unfortunately, neither source of legal administration is a source of information and we advise the utmost caution and, especially, an inquiry into the actual composition of a pain relieving drug, before prescribing. As the application of the law depends upon rulings which have not been in all cases made by those familiar with pharmacology, various inconsistencies and contradictions have occurred and we would warn that a proprietary, advertised in good faith as not amenable to the narcotic laws, may by a subsequent ruling become so.

The State Civil Service Commission, Albany, announce various examinations in which medical men would be interested but the information is received too late for publication before the date of the examinations. We would advise our readers who are especially interested to apply directly for information blanks.

Occupation in Relation to Tuberculosis. The Bureau of the Census announces that, it expects to issue a bulletin based on the statistics of 1918 and it particularly urges physicians to note the occupation on all death certificates (and, by implication, on morbidity reports, etc.). It occurs to us that it would be well to establish a proper designation for many women and girls not engaged in "gainful" occupations and only by an extension of the term, to be designated as housewives; also that some plan should be formulated to indicate the essential hygienic conditions of work, for instance, to show whether a clerk is engaged in indoor or outdoor work, and to show how superintendents, managers, secretaries, vice-presidents, etc., are actually employed.

X-ray Examination of Soldiers. 1030 members of the 69th Reg. N. G. N. Y. have been submitted to examination. Of the first 600 plates examined, 22 showed active tuberculous lesions sufficient to disqualify and 18 old lesions.

Fecundity of Twins. Some months ago, we published an abstract of an article by J. P. Foster, claiming that of twin sisters, one is always sterile. The Medical World published

the same claim and in the August issue, prints 8 letters, citing 15 pairs of fecund twin sisters. We wish we could secure the same spirit of co-operation.

Commissions in Medical Reserve. The following, in addition to those previously noted, have been announced: Marshall Clinton (in charge of Base Unit No. 23), Major; John F. Fairbairn, Major; Nelson G. Russell, Milton M. Goldberg, Wm. Ostrow, Walter L. Hachemer, Albert A. Gartner, G. J. Geisler, Richard N. De Niord, 1st lts., all of Buffalo.

The Buffalo Assn. for the Relief and Control of Tuberculosis has occupied the building 175 E. Swan St., where the tuberculosis dispensary is also conducted. About 135 cases are examined each month. Those intended for the J. N. Adam Memorial Hospital are submitted to further examination by the Superintendent, Dr. Horace Lo Grasso.

Tetanus Bacilli in Court Plaster. In regard to the press report that peddlers were selling court plaster infected with disease germs by German sympathizers, tests made of suspected samples at various places have shown the presence of tetanus bacilli. This does not by any means establish the contention of a deliberate plan to disseminate disease as such germs might easily be introduced in dust, especially in samples peddled from door to door in the country. Aside from a proper reluctance to admit so nefarious a practice even by an enemy, it is highly improbable that tetanus would have been selected, as this is a disease whose germs are widely distributed everywhere where horses exist and manure has been employed for the soil. Moreover, the chances of infection of superficial wounds, even when sealed by court plaster, would be comparatively small. Granted the intent to go contrary to the established precedents of civilized warfare, and it must be confessed that many facts establish such an intent, it is altogether probable that our enemy would have selected a far more efficient means and would not bring coals to Newcastle by impregnating plasters with tetanus bacilli. The moral against buying any kind of domestic medical supplies from irresponsible dealers should, however, be emphasized.

Prisoners Held by Central Powers. Figures in parenthesis by Germany. Russians 2,080,699 (1,212,007), French 368,607 (367,124), Serbian 154,630 (25,879), Italian 98,017 (none). Roumanian 79,033 (10,157), British 45,241 (33,129), Belgian

42,437 (42,435), Montenigrin 5,607 (1). From the standpoint of the holders, the prisoners are divided as follows: Germany 1,690,031, (17,474 officers), Austria 1,092,055, Bulgaria 67,582, Turkey 23,903, total 2,874,271 including 27,620 officers.

Medical Reserve Officers. The American Medical Editors' Assn. has pledged its support to the Surgeon General. The country still needs officers for the Medical Reserve Corps. It should be a matter of pride to every physician that the whole system of an Officers' Reserve Corps originated with the Medical Dept. of the Army. Do not delay volunteering because of delays in assigning other medical volunteers to active duty. In the first place, part of this delay is such as would occur in any business whose office force encountered the sudden demand of an increase from 600 to 20,000 and whose total employees were similarly to be increased from about 1000 to possibly 150,000. In the second place, about half of the 11,000 volunteers for medical reserve duty failed to make good when called—and the word called may be construed in a figurative sense. In the third place, the age group 21-31 not only fails to represent the active medical profession as it does the manhood of the country generally but does not include as many physicians as are needed. Any physician up to 55 is acceptable, if otherwise in good condition.

Medical Reserve Officers are commissioned in three grades: First Lieutenant at \$2000, Captain at \$2400, Major at \$3000. Only the older and especially experienced may expect Captains' commissions and only those who are very distinguished, Majors'. Perquisites, excess pay of 10% for oversea service and lack of opportunity to spend money, render these salaries more liberal than they seem. While in service, these officers enjoy all the advantages of regular army officers, including disability pensions and some form of insurance will probably be provided by the government. We do not believe that many physicians are cowardly but it is allowable to reiterate that the statements as to risk have been greatly exaggerated. The medical profession of Great Britain has not been wiped out; the surgeons in the British forces have not equalled the total number of medical men in the whole Empire and 12,000 of them have not been killed or even wounded. Just 195 allied surgeons were killed on the western front up to June 27 (three years less about five weeks). In passing, it may be complained that these and similar alarming rumors have been due to the policy of converting news into propaganda, of scaring when there seemed to be a little apathy and of reassuring when a state of too great alarm was developed.

Application blanks for the Medical Reserve Corps may be obtained of the Surgeon General, Washington, of Capt. Herbert M. Smith, M. D., Buffalo, or of this office.

We regret that statements have been made that the medical officer can live on \$25 a month and send \$150-\$225 a month to his family. Barring exceptional conditions, it is neither true chivalry nor good economics. Both sexes and all ages must sacrifice something for patriotism. The fact is that there is considerable profiteering by private firms catering to officers, that the enormous demand for cloth and other material has resulted in an inevitable increase of prices generally and that there is a shortage of many things normally carried in stock in the Quartermaster's Dept. On the other hand, the war regulations proscribe civilian dress, dress uniforms, side arms and, with good sense and consideration, the equipment actually required for Medical Reserve Officers has been reduced to a minimum, of which a list is furnished when commissions are sent. The estimate of \$350 for an officer's equipment* is unnecessarily high under these circumstances. Part of the equipment can be obtained of local quartermasters and most of the remainder of the Depot Quartermaster, 2600 Gray's Ferry Road, Philadelphia. Uniforms should, of course, be re-fitted by one's own tailor or the cloth may be obtained at the above address. Mess expenses in training camps are \$0.75-\$1.00 a day. All of the personal equipment, up to cots, bedding, medical supplies, etc., can be carried in an ordinary steamer trunk and suit case or large satchel, and we understand that the bedding and tent equipment may be secured at camp or at stations to which officers are ordered. A fair estimate of necessary preliminary expenses for the minimum equipment is \$150. About as much more would be needed to cover current and traveling expenses till the first pay is received. Thereafter, something like \$50 a month should be held for current expenses. We understand that, while food and other prices have advanced in Europe, they are not yet so high on the average as in this country. Owing to the maintenance of a fairly stable battle line and of the gold standard of money, the extravagant prices familiar from the accounts of Civil War officers, will probably not be encountered unless very occasionally.

One thing should be very clearly understood by candidates for the Medical Reserve. A very different form of patriotism is required from that exemplified by some civilians who ride around in autos decorated with claims of safe and glorious services, advice to others to enlist or conspicuous notices that they have invested an unspecified amount in Liberty

bonds. Don't volunteer unless you mean to accept orders. The Surgeon General does not intend to waste good medical material by unnecessary risks nor good fighting material by ordering internists to perform capital operations. He needs different kinds of skill for different duties—even obstetrics, gynaecology and paediatrics are included in the duties of the Medical Dept. But fine discriminations of specialism cannot always be made, the prudent man who would prefer safety far from the firing line may be ordered to the front of the front and the man who prefers a career of moving picture heroism, may be ordered to fill the place of a more experienced officer and to do very humble routine work in a post in this country.

The National Committee for Mental Hygiene has issued a circular in anticipation of duties in regard to detecting nervous diseases in the draft, and the prophylaxis and treatment of the various neuroses and lesions that may be expected in military service. The circular is too lengthy for publication but those interested should apply for a copy to the Associate Medical Director, Dr. Frankwood (sic) E. Williams, 50 Union Square, N. Y. City.

Diminished Casualties for France. The French Army now amounts to a little less than three million on the western front. Casualties (killed, missing and prisoners, apparently not including wounded unless dying) amounted to 5.41% of the total mobilized strength for the battles of Charleroi and the Marne; 2.39% for the first half of 1915; 1.68 for the second half; 1.47 for the first half of 1916; 1.28 for the second half. The last annual rate is 2.75%. It is impossible to state what proportion consists of deaths and what of capture. A fair estimate is that 1.5-2% means military deaths, from 3 to 4 times the average mortality in peace for men of the 20-30 age group.

The National Surgical Dressings Committee has become a component organization of the Red Cross, this being a step in the direction of unifying all of the various war relief organizations, in the interests of economy and efficiency.

Draft of Physicians Probably Unnecessary. At the risk of contradicting statements made elsewhere, we would state that the latest obtainable information shows that, of a total estimate of 20,000-25,000 surgeons ultimately needed by the U. S. (this estimate obviously applying to the completion of an army of 2,000,000 or more) 16,000 applications for the

Medical Reserve Corps have been received, not to mention the fact that the National Guard amounting to about 500,000 is supplied and that the Regular Army of about 300,000 is at least half supplied by permanently appointed surgeons. Nearly 9,000 commissions have been accepted from among 14,000 recommended as fit, out of the 16,000. About 2,000 commissions have either not been issued or have been issued too recently to expect a response except from those of unusual promptness. By the time this is in print, the probability is that at least 12,000 of the 20,000-24,000 medical officers ultimately needed, will be available for duty. Meantime, applications are coming in at the rate of 100-150 a day. It should be understood that a good many physicians, who are inclined to enlist, must make careful preparation in various ways before they can even volunteer. Many others are deterred from immediate action—though they should understand the advantage to the Government as to the individual of being able to estimate its resources in advance of immediate needs—because they note that their confreres have waited weeks for commissions and other weeks for orders. There is every reason to believe that an adequate number will be secured by volunteer methods, in amply time. However, those who are delaying, should take the initial step promptly, realizing that the work of enrolling and assigning to active duty is necessarily tedious.

Proposed Increase in French Food Ration. The demand has been made for an increase from 300 grams to 500 grams a day. This is a dietetic puzzle. Excepting clear fats and oils which, of course, can be used only to a limited extent, very few even of the most nutritious food stuffs yield more than 3.5 calories per gram and the minimum average ration, in calories, is about 2200. Properly assorted, it would take just about 500 grams a day of chemically pure proteid, carbohydrate and fat—of which only the last two are practically available in pure form for food—to make a day's ration. Taking food stuffs as they run, even eliminating the coarse vegetables, about 1000 grams are required daily.

Government Control of Wheat. When, a few years ago, we suggested that a return to the old system of public granaries might solve the problem of the cost of living, we meant it in quite an academic sense and were rather surprised to find by calculating that, in regard to finance, provision of containers and preservation against decay, the proposition was feasible. Under the impetus of war, steps have actually been taken for the government to buy and sell at reasonable

prices, the entire wheat crop. If nothing further is done, such action will automatically control to a considerable degree and quite directly, the prices of all other cereals. As a precedent, it will very likely lead to similar control of other staples. If so, it may be confidently asserted that the war will pay for itself, so far as the people are concerned, no matter what it costs. This statement must be taken in a purely economic sense.

Speculative Food Waste. The deliberate waste or destruction of foods in order to keep up prices, is one of the meanest problems of economics. We suggest the following scientific basis for suitable measures of control. The average day's ration is 2500 calories; withholding nutriment for 40 days, practically always causes death. 100,000 calories, therefore represents a human life. Tables, accurate enough for practical purposes and bearing the endorsement of the government exist, from which the caloric value of a given weight of any food stuff can be calculated. When anyone deliberately, with premeditation, destroys 100,000 calories of food stuffs, treat him exactly as if he had directly instead of indirectly destroyed a human life, with due regard to precedents of peace and war. Differences in degree often virtually constitute differences in kind. Throwing out a crust of bread may be responsible but does not require serious consideration, any more than a kick in the shins or a slap on the face. The mathematic basis suggested affords a practical way of discriminating between mere carelessness in conservation of food and deliberate criminal attempts to put it above the reach of the population.

Mobilizing Reserve Drug Stocks. So much has been published regarding the scarcity of drugs, their high price, and the absolute lack of certain ones, that we have contemplated the establishment of a clearing house so that physicians and druggists could dispose of drugs for which they have no use and which might be of great value to others. Obviously, in carrying out such a plan, physicians would mainly provide drugs, including proprietaries, foods and mineral waters for sale while druggists would mainly act as purchasers though the latter would have an opportunity to get rid of articles especially ordered for some physician to prescribe and in which he speedily lost interest. Personal inquiry has led to the belief that, except for a few articles to which such a system would scarcely be applicable, we have not yet reached the stage of depletion at which it is necessary "to scrape the barrel." The advance in prices seems to be due mainly to

manipulation, with the easy excuse of disturbance of supply and demand and the druggists whom we have consulted feel that it is easier to lose an occasional prescription than to make any organized effort to secure drugs that are not available through the ordinary channels. However, the Journal stands ready at any time to assist in this direction and will receive lists of drugs and analogous articles wanted and for sale, from either physicians or druggists. Under present conditions, we are inclined to believe that the clearing house had better be limited to offers to hospitals, the Red Cross or other philanthropic institutions.

Statistics of Medical Education, 1917. Total students 13,764 (11,826 in 1880; 28,142 maximum in 1904, averaging about 25,000 1900-1910). All non-sectarian but 580 homoeopathic and 250 eclectic. (From 1880 to 1907, over 1,000 homoeopathic, 545 to 1,014 eclectic, about 300 of other schools which have disappeared since 1911). Total graduates 3,379 (lowest number since 1880: 3,241). Over 4,000, 1890-1912; over 5,000, 1900-1906, maximum 5,747, 1904. All non-sectarian but 180 homoeopathic and 65 eclectic, formerly sectarian graduates amounted to about 500. 1,099 (32.5%) of this year's graduates had bachelor's degrees, the maximum proportion. In 1910 15.3% of graduates had bachelor's degrees; in 1915, 24.3%; in 1916, 26.9%. The proportion for this year's graduates was 34.4% for non-sectarian, 10.5% for homoeopathic, 3.1% for eclectic. 153 women graduates, 610 students, 1917. From 1900-1907, medical colleges numbered within 2 of 160, (125-127 non-sectarian, 18-22 homoeopathic, 8-10 eclectic, 3-5 physio-medical, etc.) In 1917 (as in 1915) the total was 96, including 9 homoeopathic and 4 eclectic. Tables compiled for 3,015 graduates from 79 colleges give the average age of graduation as 26.4, the same as for 1,668 students of 41 colleges requiring high school education in 1913; 446 students at 14 colleges requiring one year of college work in 1913, gave an average of 1/10 year less; 901 students at 24 colleges requiring two or more years of college work in 1913, gave an average 2/10 year higher. Somehow the argument of undue delay of entrance on life work, does not hold good in practice. In 1917, 2,577 were graduated from Class A colleges, 648 from B and 154 from C. (Acknowledgment to Jour. A. M. A.)

Military Strength of U. S. Last year, the Regular Army numbered a few less than 103,000 and the effective strength of the National Guard was estimated at about 125,000 though its normal strength was considerably greater. At present, the

Regular Army and the National Guard each number very close to 300,000, there are about 55,000 reserve enlisted men and about the same number of officers in the two armies and in reserve, the aggregate being 710,000. The sea forces number in all, 233,000. The recent increase in regimental strength is being met by enlistments. It is altogether probable that before reaching the drafted National Army, we shall have an efficient land force of at least 800,000 and perhaps an even million.

Reorganization of Army Units. Rather unexpected radical changes have recently been made and definite information has not been received of the final make-up. In an approximate sense, the following seems to be correct: Each unit, on the basis of the previous wars of the U. S. and the average peace strength, will be enlarged to the size of the next regular unit, the command and responsibilities of an officer of any given rank being correspondingly increased, resulting in a decided economy, both as regards salaries of officers but proportionate number of officers and enlisted men. For example, the old, temporary squad or company division will be more or less definitely assigned to a second or first lieutenant, instead of having the lieutenants as assistants without definite command, and will number 60 or more, which was the old practical company strength. There will be two captains to a company, one apparently having about the same duties as a vice-president, to wait till his senior is killed or incapacitated, and the company equals the former actual strength of a battalion. The major, in charge of a battalion, will command what was formerly a full regiment. Indeed, as the present war is being fought so as to render feasible a scheme for reserve companies to keep the numbers full, the company will be nearly equal to the actual fighting strength of Civil War regiments during a good deal of the time of hostilities. The regiment is to be increased to 3600 men, will include headquarters and machine gun companies and, we understand, artillery and other branches so that it will not only be fully equal in numbers to the old brigade but will be a polycratic unit and will thus adopt to some degree, the conception of the former division as a complete fighting unit. The brigade will be relatively small, consisting of two regiments and as the division is to be limited to 19,000, it looks almost as if the brigade itself would be found to be an unnecessary and cumbersome intermediate unit. The corps will be restored and will be of about the size of the Civil War army in any single terrain or of the "field army" which never really passed the paper stage. The economy of

managing what was formerly a rather large brigade, including three regimental commands, with a single regimental staff will be considerable. The question may arise whether it is quite fair to the officer to promote him in regard to the number of men whom he is to command without an increase of rank or pay or whether, as a matter of efficiency, the extension of executive authority will be feasible. On the other hand, the present war involves a fixity of terrain and of routine not previously experienced while the authority and efficiency of non-commissioned officers has been gradually increased.

Proposed Exemption of Medical Students From Draft. A movement has been made to secure legislation. There are (A. M. A. statistics) 10,385 students remaining from last session's enrollment, of whom about 75% are liable to the draft though, of course, only about 20% would be drafted on the basis of a National Army of two million. There are obvious reasons why the exemption, if passed, should not apply to future matriculants. There would be the temptation to slackers and the future medical profession would be injured both quantitatively and qualitatively. The argument that, with an annual graduation of slightly over 3,000 physicians, there is already a demand for 4,000 internes annually, does not appeal to us. Whether young men of an average age of 26 and a quarter to a third of college education beside their technical training, should be expected to work a year for experience plus board and washing and, perhaps an honorarium of \$2 a week, is a question that we think should be answered as it is for teachers, engineers, ministers, plumbers and carpenters. The economics of the present interne system is the natural result of a disproportionate supply and merely one example of the condition of the medical profession. Without any seeking on our part, the War affords us a golden opportunity to hasten the righting of an economic wrong that would not be tolerated in any other profession or trade.

Poliomyelitis. One mild case has been reported for Buffalo, up to Aug. 22. Very few cases have been reported for the state or the country generally, as compared with the epidemic of last year. Why? Did the quarantine and sanitary measures that apparently had no effect last year, except in producing a minimum general death rate among young children in spite of the epidemic of this disease, stamp out fomites? Was the susceptible material exhausted and, if so, what constitutes the aggregate small proportion of sus-

ceptible individuals? Was there some insect carrier prevalent last year that is absent this year? Are the climatic differences between the two years the reason, either as acting on an insect host or in other ways? Is the disease not specific in the clinical sense and is it still present in a form not recognized?

Suppression of News. Several items, including personal notes of appointments to the Reserve Corps, etc., have been omitted. While we do not flatter ourselves that the publication of such matter in a monthly journal would have much military importance, we wish to conform to the spirit of the request of the government. In some instances, also, private reasons exist for not divulging military service. We have, therefore, adopted the general policy of refraining from publishing items which have not already been given publicity or which are not personally sent for our columns.

Limitations to Use of Army Titles by Red Cross. Henry P. Davison, Chairman of the War Council of the American Red Cross, announces that military titles are conferred solely as a matter of protection and are to be used only during actual service in the war territory, not in this country. (In plain words, we understand that the military titles are given simply to remove the excuse for treating Red Cross workers as snipers).

Small Pox. One case has developed in Buffalo, in a negro, one of a construction gang from Erie, Pa. Chicago has had quite an epidemic from a similar source.

The Erie County Morgue is to be improved.

German Losses. English tabulations of lists issued by the German government up to July 1 (not necessarily including recent losses nor representing the actual total) show: Killed (including fatal wounds) 1,032,800; Died of Sickness 72,960; Prisoners and Missing 591,966. (Note that the Allies' statistics published in another paragraph show 1,690,031 German prisoners); Wounded 2,825,581. Taking the German reports of deaths and, obviously, there can be no counting the enemy's dead in this war, the Allies' reports of prisoners and estimating 10% of wounds as producing permanent incapacity, the definitive losses of Germany amount to considerably over 3,000,000, out of an initial "militia of about 7,000,000. The annual increment of males maturing to military age is about 1% of the population (about 67,000,000),

about 500,000 annually being available for military service. The net loss for the slightly less than three years has, therefore, been about 1,500,000.

Niagara County Tuberculosis Hospital. Bids aggregating \$108,960, have been received for the 95-bed hospital planned for the old poor-house farm near Lockport. The appropriation was \$100,000 but the estimate exceeded the bids.

Draft Statistics. Of 100 summoned to Olean, 81 reported and 64 were passed.

The Medical Division, U. S. Reserve Corps, numbered as follows, Aug. 17: Majors, 350; Captains, 1,367; First Lieutenants, 7,158.

Base Hospital No. 23, was mobilized at Ft. Porter and began active training, Aug. 23. The medical staff is as follows: Major Marshall Clinton, commanding officer; Captain Lorenzo Burrows, Jr., adjutant; Captain J. H. Hickey, quartermaster; Major Nelson G. Russell, Major John F. Fairbairn. Captains John B. Betts, H. A. Smith, D. C. McKenny, F. P. Goodwin, F. W. McGuire, J. P. Brennan, R. E. DeCeu, Baldwin Mann. Lieutenants H. F. May, W. L. Machemer, H. C. McDowell, J. A. P. Millet, A. A. Gartner, R. N. Deniord, A. W. Thompson, H. K. Hardy, T. F. Donovan, H. C. Fairbanks. Dental Surgeons, Lieutenants C. L. Storms and E. J. Knoche. The trained nurse staff numbers 65, as follows: Mary Mahl, Mabel Caldwell, Matilda Stärtzer, Mara Fellers, Frances Welker, Elizabeth Welch, Clara Judson, Josephine Stevens, Anna McDonald, Jennie McNaughton, Margaret Bailey, Ella Renn, Sarah Smith, Elsie Sarge, Jessie Urquhart, Edna Reese, Emma Snyder, Edith Zamstone, Edith Switzer, Jessie Murray, Mary Meek, Josephine Briody, Mildred Beamer, Jean Crawford, Mina Ross, Margaret Bruce, Gladys Baker, Helena Meadows, Frances Evans, Anna Austin, E. Blanche Augustine, M. Volland, Mildred Davis, Lilly Strange, Mabel Waltham, Mary Winter, Grace Williams, Sarah Campbell, Mary L. McIntosh, Bertha Bezitt, Mabel Gardner, Mildred Englend, Martha Morningstar, Cora McDade, Alice Wallace, Edith Fenwick, Margaret Hennessy, Josephine Ballou, Ada Hamilton, Nora Kraft, Clara Dudley, Josephine Hull, Maude Bell, Mabel Barr, Luella Clark, Carol Schmid, Norrine Walsh, Florence Carpenter, Dora Scherur, Anna C. Minet, Evelyn C. Carney, Edna Crawford, Kathleen Munschaw, Nellie Donovan. There are 150 enlisted men and a clerical staff.

SOCIETY MEETINGS

Brief reports and announcements of meetings of societies of Western New York, and those of general scope, are requested from Secretaries. Copy should be on hand the fifteenth of the month. Full transactions will be published at cost of composition.

DOCTOR: Is your Society properly represented here? If not, please bring our standing announcement to the attention of the members.

The Medical Society of the County of Erie held a special military meeting June 27, in Alumni Hall of the Medical Dept. of the University of Buffalo. Capt. H. H. Glosser, M. D., showed lantern slides illustrating the experience of the 74th Reg. N. G. N. Y. at the Texas Border and patriotic addresses were made by Dr. T. H. McKee and Lt. Col. A. H. Briggs, M. D.

The American Medical Editors' Assn. at its annual meeting in N. Y., June 4 and 5, agreed to co-operate in the work of securing volunteer medical officers and urged on all medical journals the duty of publishing matter, especially with reference to the Reserve Corps. This journal has already begun this work and will continue to do so. We consider it unnecessary to publish the blank form for volunteering but any physician can secure the same on application.

The Western N. Y. Veterinary Medical Assn. held its fourth annual meeting in Buffalo, June 29. The clinic was held in the hospital of the building of the Erie County Society for the Prevention of Cruelty to Animals in West Tupper Street. Papers were read by Dr. J. V. Hills of Gowanda; Dr. F. E. McClelland of Buffalo; Dr. Edward Rafter of Hamburg; Dr. A. Crowforth of Lockport, and Dr. F. F. Fehr of Buffalo. At the evening session, these officers were elected: President, Dr. J. L. Wilder of Akron; Vice-President, Dr. W. E. Frint of Batavia; Secretary, Dr. F. F. Fehr of Buffalo; Censors, Dr. Charles E. Gibbs, Dr. E. L. Volgenau, Dr. John Wende, Dr. George R. Chase, Dr. Edward Rafter, Dr. F. E. McClelland. The next meeting will be held in December.

The University of Toronto Alumni Assn. of Buffalo and Niagara Falls, organized in Feb., held its June meeting at

the University Club, Buffalo, under the presidency of Dr. John D. Bonnar, who gave an account of the general American Alumni Assn. meeting in N. Y. in June. (Report of this and three preceding meetings received too late for publication in August issue).

The Medical Society of the County of Erie held a special meeting in Alumni Hall, University of Buffalo, July 30. Major Isaac H. Jones, Medical Officers' Reserve Corps, Philadelphia, demonstrated the revolving chair used for equilibration tests for the Aviation corps, described the technic and principles. Moving pictures were included in the demonstration. 30 units for the examination of applicants for the Aviation corps have been or will be established at various points, and it is estimated that 10 or more can be examined daily at each, so that the 100,000 quota can be filled within a year. An unnoticed but really notable detail was the cordial reference by Major Jones to the studies of Viennese specialists. The medical profession serving in this war will not confuse race hatred with efficiency. A petition was circulated and largely signed, demanding the application of the selective draft to the medical profession, between the age limits of 21 and 45. This petition originated with the State Society and is in harmony with the action of various other states and in opposition to the present attitude of the national authorities with regard to the Medical Dept. of the Officers' Reserve Corps.

OUR CONTEMPORARIES

One of our contemporaries devotes the equivalent of two pages of this journal to proving that tuberculous men ought not to be enrolled for military service. Does any sane man doubt it? The only practical point is in regard to healed lesions and incipient cases difficult to detect. A very small minority hold that such cases could endanger others and it is altogether probable that training camps would be a valuable therapeutic aid to the great majority of the tuberculous individuals of this grade. Unfavorable cases should, with ordinary skill and attention, be detected in training camps before harm occurred to either the patients or others.

The Atlantic Monthly, June and July, contains articles on Humanism by Paul Shorey, which we recommend to anyone interested in acrometopic English. The style is so different

from that of medical writers that we have not been able to comprehend the author's argument but, as a study in words and construction, the articles are well worth reading.

M. D., *A Journal for Medical Defense*, begins its first volume in June. The subscription is \$1. Dr. John P. Davin, Editor, 117 W. 76, N. Y. The journal is devoted mainly to counteracting the attempt to socialize the practice of medicine. One of the leading articles is entitled "Is the Practice of Medicine Worth Saving?"

OBITUARY

Readers are requested to report promptly the death of all physicians in Western New York, or former residents of this region, or graduates of any medical school in Western New York, and to notify the families of the deceased of our desire to publish adequate Obituary notices.

Dr. Wm. A. Keegan, Chicago Homoeopathic, 1888, died suddenly at his home in Rochester, Aug. 8, aged 56. He was born in London, came to Canada with his parents in his childhood, and was educated at the Peterboro Collegiate Institute. After graduating in medicine, he took post graduate work in Vienna and located in Rochester in 1893.

Dr. Frederick W. Smith, Syracuse 1908, of Syracuse, died July 31, aged 59.

Dr. Walter D. Greene, Buffalo, 1876, died of cerebral haemorrhage at West Falls, Aug. 3, aged 64. A full obituary notice by Dr. De Lancey Rochester will appear in our next issue.

Dr. Theodor Kocher of Berne, Switzerland, died Aug. 4. He is said to have performed the first successful operation for goitre, was well known for his work in plastic surgery and received the Nobel Prize for surgery, in 1909. His recent studies had been mainly along the line of a blood preparation to check haemorrhage, probably similar to that already elaborated by Busch and Clowes of Buffalo.

Charles A. Wall, Jr., son of Dr. Charles A. Wall of Buf-

falo, having qualified as an aviator for the U. S. Army and expecting soon to be sent to France, was burned to death while experimenting in an aeroplane with a new bomb, at the Curtiss Aviation Field, Aug. 20.

PERSONAL

Announcement of removal, travel, and other matters of interest are requested. Please report errors in the listing of any physician in the State and other directories, that we may co-operate with the State Society in securing a correct list.

Dr. Henry F. Senfter, formerly of the California State Sanitary Board, succeeds Dr. Edward Clark of Buffalo as State Sanitary Supervisor for the district, including Erie, Niagara, Orleans and Genesee Counties. His office will be in Ellicott Square, Buffalo. Dr. Clark goes to Albany as Acting Director of the Bureau of Child Hygiene.

Dr. Carlton R. Jewett of Buffalo has moved to 248 Linwood Ave.

Military Service: Dr. Floyd W. Haynes of Jamestown, 1st Lt., Medical, U. S. R., has been ordered from Ft. Benjamin Harrison, to service with the 3d N. Y. Artillery (formerly 65th Inf.), now 106 Reg. federal numbering. Drs. M. Emmett House and Theron B. Bond, of Cuba, were tendered a banquet, Aug. 13, having been ordered to training camp. Dr. C. H. Mackey of Lancaster was ordered to training camp, Aug. 18. Dr. Victor A. Tyrasinski and Dr. Harry O. Maldinger of N. Tonawanda have been ordered to Ft. Benj. Harrison and to Washington, respectively.

Dr. Milton Bork of Buffalo has been appointed to the staff of the Anti-tuberculosis Society.

Dr. George Edward Fell of Buffalo is at present at 2469 Geneva Terrace, Chicago, and will be glad to hear from his friends, as he is still not fully recovered.

Dr. H. Neville has moved from Falconer to Jamestown.

ABSTRACTS

Have you ever felt that this department of the **BUFFALO MEDICAL JOURNAL** was lacking in abstracts of your specialty, or that such as were published lacked the expert judgement which you yourself could have exercised in selection and preparation? If not, you are more charitable than the editor has been to himself. If so, will you assist in abstracting from a few journals, and thus make this department more representative and more valuable? Incidentally, there are few forms of study more helpful to the worker than this.

Recognition of Pancreatic Insufficiency. H. Ryerson Decker, Pittsburgh, Boston M. & S. Jour., June 21. There is no pathognomonic symptomatology and even inspection at operation does not reveal the finer lesions. The oil test breakfast of Boldyreff and Volhard tends to cause regurgitation into the stomach and hence to allow tests for tryptic digestion. 200-250 c.c. of olive oil or cream is given plus milk of magnesia (Lewinski) to neutralize acidity. The test meal is not tolerated by all, it does not invariably cause regurgitation of duodenal contents, HCI may be secreted and thus inhibit the tryptic test (and conversely, without any organic or marked functional defect, pancreatic juice may not be secreted at the particular time. Ed.) Einhorn's method of duodenal intubation is theoretically ideal but many candidly confess practical difficulties and others emphasize the fact that, without abnormality, pancreatic secretion may not be called into action. Sahli's glutoid capsule test, theoretically limited to the digestion of the capsule by pancreatic secretion alone and liberating some rapidly eliminated substance to be tested for in the urine or saliva, has not given dependable results in the hands of others. Schmidt's cell nuclei test postulates that the nuclei are digested solely by pancreatic nucleases. Various sources of nuclei are employed, alcohol-hardened beef, thymus gland, red blood cells of fowls, etc., and identification is aided by inclusion in silk or gauze capsules, attachment to beads (Einhorn), accompaniment by indicators (barium sulphate, Fronzig). It is doubtful whether nucleases are derived solely from the pancreas and it is conceded that more than 36 hours' delay in the intestine allows bacterial decomposition while, on the other hand, at least 6 hours' sojourn is necessary. Azotorrhoea is subject to similar criticisms. Normally the faeces contain 5-10% of the intake and the presence of 30% or more naturally suggests pancreatic failure. Creatorrhoea, the presence of an excess of muscle fibres, say more than 2 in an average field on a diet of 2 ounces of meat a day; tryptic power; steatorrhoea;

presence or absence of lipase and diastase in the faeces; lecithin, normally $\frac{1}{2}$ gram a day in the faeces, destroyed by pancreatic secretion but absorbed, even if thus in excess by bile; are all subject to both explainable and unexplainable variations.

All the foregoing tests are of external secretion and none is dependable by itself. Of tests of internal secretion, may be mentioned glycosuria but only about 30% of glycosuric cases are of pancreatic origin. The Cammidge reaction is now held by most investigators, not only to be lacking in pathognomonic value but, even on theoretic grounds, to be an index of general disturbance of carbohydrate metabolism and not limited to the pancreatic function. Wohlgemut, 1908, apparently demonstrated that an excess of diastase in the urine is indicative of pancreatic lesions but the author has found such excess in appendicitis and ovarian cyst and low readings for diastase in cancer of the head of the pancreas. Lowi, 1908, found that adrenalin, 1: 1000 caused no mydriasis in normal animals but did when the pancreas had been removed. Corresponding reactions were noted clinically in human beings, subject to the usual variations and exceptions. The author found mydriasis in 18 of 500 cases but only 2 were known to have a pancreatic lesion. However, 3 of the positive reactions occurred among 15 gall bladder cases and it is well known that there is a degree of association of biliary and pancreatic lesions. In 6 of the 18 positive tests, pancreatic lesion could not be definitely excluded.

(Note: 30 years ago, the best clinical teachers emphasized the difficulty of diagnosis of pancreatic disease. It remains true that no single, easy test exists, not even easy in the sense that a procedure can be referred by the clinician to a laboratory worker. On the other hand, routine faecal examinations, even of comparatively simple nature, in connection with the studies of diet and nutrition, and the usual physical examinations, carefully applied to the individual case, enable us to claim a fairly efficient diagnostic ability).

Poliomyelitis. Horace Greeley, L. I. Med. Jour., April, collects the following notes as to occurrence in breast-fed infants: N. Y. 1907, 121 breast fed among 283 cases under 2 years; Ia. 1910, 2 among 47 considered; Cincinnati 1911, 15 among 83 considered; Buffalo 1912, 12 among 40 considered. Several negative and vague reports are also included. We have already mentioned his statistics as to the correspondence of incidence with high summer temperature.

**Acute Paralytic Disease
Poliomyelitis Epidemic**

Among Domestic Animals Coincident With Epidemic Poliomyelitis.
Annotation Authority

- Vermont (1894) "Horses, dogs and fowls affected with paralytic disease." Caverley—J. A. M. A. 1896, Vol. XXVI, P. I.
- Sweden (1905) "Paralysis among dogs and other animals." Wickmann.*
- Dubois, Pa. (1907) "Paralysis among pigs and chickens." Free.*
- Wisconsin (1907) "Paralysis among colts, sheep, cats, ducks and many other animals." Manning.*
- Oceana Co., Michigan, (1907) "Paralytic disease of chickens." Griffin—J. M. St. M. Soc. Feb. 08.
- Rhenish Westphalia Germany (1909) "Great mortality among chickens." Romer—On Epidem. Kimderlah, Berlin, 1911.
- Massachusetts (1909) "Paralytic disease prevalent among animals." Lovett—Month. Bul. Mass. St. B. of H. June, 1910. Hill.*
- Minnesota (1909) "Colts, paralysis among." ens.
- California (1910) "Paralysis among colts, dogs, cats and chickens." ens.
- Washington, D. C. (1910) "Paralytic disease appeared among ducks and chickens just prior to the outbreak." Special Committee of investigation.
- Iowa (1910) "Paralysis among cats, hogs and chickens." Blerring.*
- California (1910-11) "Paralytic disease coincident among domestic animals." Gundrum—Cal. St. J. of Med. May, 1913.
- Sao Paulo, Brazil (1910-11) "1000 horses and 4000 cattle died with 'symp-toms of rabies.'" Carina.*
- Cincinnati, O. (1911) "Paralytic disease coincident among domestic animals." Frost—Hyg. Lab. Bul. No. 90.
- Indiana (1911) "18 paralyzed animals associated with 102 King.*"
- Ohio, Ky. (1911) "Paralysis among chickens." Batte.*
- Alaska (1913) "Outbreak was preceded by a great epidemic of distemper among the dogs." Pierson—J. A. M. A. Feb. 28, 1914.

Conclusions.

Not to make useless repetition of what has been gone over in the foregoing, a rather dogmatic statement will be made in summation of the facts elucidated:

It has been demonstrated that the organism isolated from the nerve centers of cases of poliomyelitis (including the "streptococcus" described by Rosenow and others) is a pleomorphic bacillus of the distemper group, which varies in characteristics much as the various, supposedly different, members of the group do from one another. That this poliomyelitis bacillus could cause paralysis in cats, rabbits and guinea pigs, and that an accidental passage of a culture through man gave rise to abortive symptoms of the malady. That after this last named passage it could produce paralysis in a rabbit, and a contagious infection of guinea pigs with nerve center lesions; and, finally, that from the guinea pigs it (the same bacillus) could produce distemper in cats.

Further it is shown that the organism is saprophytic and grows well in milk at "summer heat;" and that it resists the pasteurization process, while contained therein. Also, that it forms spores, and is a "filter passer."

Finally, that it seems certain that, while contract cases of poliomyelitis may occur, either by direct transmission of the germ from animal to man, or from man to man, the great mass of cases which comprise epidemics are most probably caused by milk borne contagion, and that it seems probable that we shall have to question our cows as possible "carriers" of the infection, although, it is, of course, evident that infection could get into milk from other animals, as the cat and dog, or even man.

*Quoted by Frauenthal and Manning in their book on poliomyelitis.

Hereditary Syphilis and Appendicitis. Gaucher, *Le Prog. Med.*, Apr. 7, page 118, reports a syphilitic father and mother. There were 3 abortions, 8 births at term, 3 infants dying early. All the surviving children had appendicitis and 3 died.

Sodoku. S. Costa and J. Triosiere, *Soc. Med. des Hop.*, Nov. 24, 1916. This is a fever caused by the bite of the ordinary rat, the incubation being 2 or 3 days, the febrile stage 10-27 days. Miyake has described a spirochete visible with the ultra-microscope. It is rare in Europe. The present case is described as a septicaemia and it seems doubtful whether it is the specific infection with which Miyake has connected a spirochete. Sepsis due to bites of various animals is not especially uncommon.

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BUFFALO MEDICAL JOURNAL

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ORIGINAL ARTICLES

The right is reserved to decline papers not dealing with practical medical and surgical subjects, and such as might offend or fail to interest readers. Contributors are solely responsible for opinions, methods of expression and revision of proof.

High-Frequency Oscillating Currents.

By JOHN M. GARRATT, M. D., of Buffalo, N. Y.

In the Journal of the American Medical Association we find the following statement: "The high-frequency currents are understood by few, misunderstood by many, and underestimated by everybody."

Misunderstandings are usually brought about by the use of inappropriate apparatus or technique with consequent failure to produce certain changes in the tissues necessary before relief of a pathological condition can be accomplished.

It is hoped that this article will aid in giving a better understanding of these currents and will also help to clear up misunderstandings.

It is a universally conceded fact that the high-frequency currents, when properly applied, do exert a most wonderful and peculiar effect upon the human body.

DISCOVERY AND DEVELOPMENT OF THE HIGH-FREQUENCY CURRENTS.

The most important part of the apparatus for the production of high-frequency currents, is the condenser or Leyden jar. This was discovered by Cuneus in 1745 and was named after the city where it was first used.

In 1881 Dr. W. J. Morton of New York produced his "Static Induced Current"—the basic arrangement of all high-frequency currents.

Ten years later Nicola Tesla demonstrated by a series of brilliant experiments, his "Alternate Currents of High-potential and High-frequency" before the American Institute of Electrical Engineers. He lighted lamps with currents

passing harmlessly through the body and heated wire to incandescence by the touch of his conducting hand; apparently defying death. Lately he has caused sparks to leap an air gap twenty-five feet in length and two or three feet in diameter. The voltage was in the billions and the amperage 800.

The development of the high-frequency currents, are mainly due to the efforts of Tesla and Elihu Thompson, American scientists. Their experiments were confined to the bipolar high potential currents.

D'Arsonval of France developed for therapeutic use the low potential currents. Oudin also of France the monopolar high potential currents.

CHOICE OF APPARATUS; TESLA APPARATUS—consists of a specially constructed transformer energized by an alternating current. From the secondary terminals one leads to the inner armature of a Leyden jar, the outer armature of which is connected to one terminal of the primary of the Tesla coil; the second, broken by a spark gap, leads to the other terminal of the Tesla coil. This coil is made up of a primary with a few turns of coarse wire and a secondary of a greater number of turns of fine wire. The oscillations obtained from a Tesla apparatus is fabulously high—millions a second and the potential may be hundreds of thousands or millions of volts. The brush discharge (effluve) may be 20 or even 40 inches in length. There are many modifications of this apparatus.

D'ARSONVAL APPARATUS:—D'Arsonval conceived the idea of using a solenoid of copper, for the alternative path of the current between the external armatures of two Leyden jars. He introduced this arrangement in 1890. The inner armatures are connected to the terminals of any apparatus which will supply a high potential current—a static machine, transformer or Rhumkorff coil. The one used, depending upon the current supply and the effects desired. The outer armatures of the Leyden jars are short circuited through a solenoid of coarse wire which induces a considerable self-inductance. A spark gap is placed between the inner terminals of the Leyden jars for the purpose of disrupting the current. This spark gap may be single or multiple; the latter increases its effect.

The writer has designed and constructed an apparatus, which for vacuum tube and autoconduction treatment, leaves little to be desired. The source of the high potential current is a 14 inch induction coil specially wound for voltage—the secondary containing 172,000 feet of No. 36 D. S. C. magnet wire. The secondary discharges into condensers of

large capacity, the external armatures are short circuited through a few turns of very coarse aluminum wire to form a solenoid 22" in diameter, from which is derived the d'Arsonval current. In the center of the solenoid is fixed a drum 12" in diameter and 30" in length upon which is wound about 500 turns of wire, from this coil is obtained Tesla currents and it gives an effluve which will leap 14".

LOUDIN APPARATUS:—differs from the d'Arsonval in the solenoid which is built up with 30 to 100 turns of smaller wire and the upper connection from one Leyden jar is arranged so that it can be adjusted from one turn of wire to another for the purpose of tuning. When properly in tune the upper part of the solenoid resonates in unison with the lower as would a tuning fork resonate with another of the same pitch.

To understand the action of the high-frequency current it is necessary to have a knowledge of the laws of induction and the phenomena of Leyden jar discharges.

PHYSICAL PROPERTIES OF THE HIGH-FREQUENCY CURRENTS:

(1) **Induction Effects** are due to the action of an electro magnetic flux on a neighboring susceptible body to the point of induced magnetic saturation. The degree or intensity of the E. M. F. is proportionate to that of the rate of variation of the magnetic charges multiplied by the frequency. One may produce an effect of high-frequency and low tension equal to that of a high tension and low frequency in the same mass.

(2) **Electro Static Properties** are physical phenomena analogous to that produced by the influence or static machine of the Wimshurst type. The electro static field is shown by: (a) The glow of vacuum tubes when brought near but not touching the terminals. (b) When two wires connected one to each terminal of a high-frequency apparatus, are held parallel to each other in the dark, sparks are seen leaping from one to the other. (c) A collection of particles of carbon or metallic dust or similar matter on the generator. (d) The generation of ozone. (e) Effluve.

(3) **Dyanamic Properties** are shown when the two terminals of the machine are connected with a very fine wire of high resistance; when the current is turned on the wire will glow and fuse from overload.

(4) **Resonancy**—See explanation under Oudin apparatus.

THE PHENOMENA OF LEYDEN JAR DISCHARGES—Leyden jar discharges are of an oscillating nature. The flow of the current is periodically reversed and the opposite wave length decreases successively in the same ratio—this it does

millions of times a second. Sir Oliver Lodge named the discharge from the internal armature the "A" spark and that from the external armature the "B" spark. The "A" spark is oscillatory with the plus in excess in one direction and if it is applied to the tissues an electrolyzing action is demonstrated by the destruction of the tissue. The "B" spark is oscillatory but with the wave-length equal in both directions; it is therefore harmless—there is no electrolyzing action.

EFFLUVE AND VACUUM TUBE CURRENTS.

From the terminal of an active Oudin or Tesla coil, is seen a beautiful brush-like discharge (effluve) of bluish color which will leap to any object brought near it. If the object is a piece of glass, one-half inch thick or more, it is apparently penetrated by the currents. The electric waves are transmitted through the air with almost the velocity of light waves which travel at something like 186,000 miles a second.

Vacuum tubes are excited by the Oudin and Tesla currents. The tubes are made in a variety of shapes to facilitate the application of the currents to the skin or cavities of the body. The effects produced by vacuum tube currents are said to differ with the degree of vacuum: 1-500 of an atmosphere gives the active tube a pinkish color and the application is less irritating—indicated in acute localized lesions. A still higher vacuum gives to the tube a bluish color and if the exhaustion is carried to 1-2000 of an atmosphere a whitish luminosity is produced—indicated in chronic conditions. With a vacuum of 1-100,000 or over X-rays are generated in addition to the electrical discharges.

Vacuum tube discharges are in effect nebulized streams of particles, which Sir Oliver Lodge asserts are composed of electrons which pass through the glass and if sufficiently accelerated, excite radiation.

THE EFFECTS OF EFFLUVATION AND VACUUM DISCHARGES are due to:

1—Electrical oscillations which relieve congestion, stimulate nutrition, and increase the activity of the vasomotor and trophic nerves.

2—Ionic bombardment which is a stimulating counter-irritant.

3—Liberation of ozone which is a powerful oxidant, disinfectant and antiseptic.

The action of nitric oxid, light and heat waves and Hertizian radiation undoubtedly contribute to the effects.

The effluve applied directly to the skin is especially valuable in septic conditions, unhealthy scar tissues, etc. The growth of pus forming organisms are inhibited and their toxins powerfully modified.

VACUUM TUBE DISCHARGES are usually applied directly to the patient. The application is called **stable** when the electrode is applied firmly to one spot or **labile** when the electrode is constantly moved over the surface treated. When the active tube is in contact with the skin, a sedative effect is produced. A spray of sparks stimulates, and undoubtedly promotes absorption of inflammatory exudates and adhesions. The applications cause a hyperaemia of the skin and exerts a beneficial action in painful conditions as neuritis, neuralgia, rheumatism, laryngitis, etc. Sparks applied to the spine will raise arterial tension.

FULGURATION or lightening treatment consists of the application of high-frequency sparks to the tissues of the body by means of a metal electrode, for the purpose of:

1—**Dehydration**: An effect produced by the application of sparks from a current of high voltage and low amperage, as from a Tesla coil, Oudin resonator of static machine. Also called "Cold spark fulguration."

2—**Cauterization** obtained from the low voltage high amperage currents delivered by the d'Arsonval solenoid—Hot spark fulguration.

There are two methods of applying fulguration:

1—**Direct Method**—Delivers the sparks from the apparatus to the patient.

2—**Indirect Method**—The patient is connected to the apparatus by a metal electrode, the fulguration electrode being grounded.

Fulguration is useful in removing small growths, warts, moles, and papillomata—from the skin and mucous membranes.

Fulguration was introduced by DeKeating-Hart of Marseilles. He used the Oudin resonator and applied sparks with a special electrode which he devised. In addition to the metal used to carry the current, is a tube through which air or CO₂ is forced. The procedure is both surgical and electrical since the sparks alone would require too many and too long exposures, and the elimination of toxic products might lead to dangerous consequences. So surgical interference must always precede the electrical treatment. Following this treatment there is a lymphorrhoea which assists in draining the lymphatics of migratory cells and at the same time myriads of beneficial leucocytes are brought to the diseased area.

Fulguration according to Hugh Young is superior to any other method for the cure of papilloma of the bladder which only a few years ago many authorities considered almost impossible to cure. He says: "This demonstration of the mar-

velous efficiency of the high-frequency currents is one of the most brilliant and valuable additions to surgery in recent years."

HIGH-FREQUENCY WAVE CURRENTS—They are obtained directly from the external armatures of the condensers. One electrode may be of metal and the other a vacuum tube; or, both electrodes may be of metal in which case one is insulated from the patient. Its action is that produced by the Faradic Current plus high-frequency oscillations. The action upon the motor nerves and muscular tissues can be regulated from mild to intense reactions.

These currents are indicated in certain forms of prostatic hypertrophy, seminal vesiculitis, and relaxed mucous membranes, paralysis, etc.

DIATHERMY AND THERMOPENETRATION are synonymous terms which apply to high-frequency currents of low voltage and high amperage when used to generate heat in the tissues through which the current surges.

Nagelschmidt, in 1907, demonstrated and recommended thermopenetration in the treatment of diseases of the joints and circulation. At a congress in Budapest in 1908, he brought out his improved apparatus designed especially for "diathermy." He found that the apparatus in use at the time did not produce sufficient amperage because the oscillations were not sustained; especially was this the case when an induction coil was used to charge the condensers:—it was determined that they discharged during a period of $1/5$ th of a second and that in the interval of $4/5$ ths of a second no current passed. The periods of discharge can be calculated from (a) the capacity of the condensers and (b) the resistance of the circuit and its co-efficient of self inductance. For efficient apparatus certain values must be up to a standard.

The heat developed is governed by the strength of the current; the rapidity of the oscillations and the resistance in the circuit opposing its flow.

The heat produced is unique in that little or none is felt at the point of contact—it is greatest midway between the electrodes, providing they are of equal size. This is a very important effect and permits of localized action upon the deeper tissues.

MEDICAL DIATHERMY has to do with a moderate rise of temperature in the tissues when the currents are applied locally or generally. It supplies heat to the part and in the quantity desired and increases instead of exhausting the energy of the living cells. It produces general pyrexia—physiological fever—Nature's first line of defence against the

invasion of pathologic bacteria—without the production of toxins.

In rheumatism and gout it is the ideal treatment; it relaxes arterial spasm, gives relief from pain and swelling and by the secondary hyperaemia produced promotes phagocytosis and improves metabolism.

Gonococci in the tissues are destroyed by a temperature of 41 C. which is easily produced by diathermy.

Recent observations have shown that female patients suffering from exhausting discharges have speedily regained their health as a result of diathermic stimulation of the pelvic tissues.

SURGICAL DIATHERMY or electrical coagulation has lately been used extensively by Doyen for the destruction of neoplasms. To quote DeKraft "The method has given beautiful results—it sterilizes while it destroys, opens no vessels, nor does it cause proximate or distant metastases. Cancer cells are destroyed at 55 C. They lose their virulence at 50 C. Healthy cells are destroyed at 60 C. Burning of the second degree takes place at 70 C. and the third degree at 75 C."

The indifferent electrode should be of large surface; the active is usually one or more needles which are inserted into the mass to be destroyed.

Experiment 1—Place two electrodes of equal size into a solution of egg albumen and turn on the current gradually. Coagulation will first appear midway between the electrodes.

Experiment 2—Repeat, but turn the current on suddenly full strength. The coagulation will appear first at the electrodes.

In both experiments if the current is allowed to surge for a sufficient time the coagulation will completely fill the space between the electrodes.

Experiment 3—Two disk electrodes of equal surface are placed on opposite sides of a potato. Allow one ampere of current to surge for a minute or two. The potato starch will be cooked in the center and will respond to the KI test while the starch at the periphery will be unchanged.

Experiment 4—Use two disk electrodes of one inch surface. Place on opposite surfaces of a two inch cube of raw meat; using the same current as above. Coagulation proteid will fill the spaces between the disks.

Maragiano placed a small electric lamp in the thorax of a dog. Two metal plates were placed one on each opposite pleura. When the current was turned on, the filament of the lamp became incandescent, showing the penetrating effect of the current.

AUTO-CONDUCTION AND AUTO-CONDENSATION —
 Auto-conduction or d'Arsonval's method. Any conductor placed within and enveloping high-frequency circuit, becomes the seat of currents of auto-conduction similar to Foucault currents. The patient is placed within a horizontal or vertical solenoid which may encircle a couch or arbor (original). The patient is not in actual contact with the solenoid. The currents may be demonstrated by connecting a 20 V. incandescent lamp with three turns of heavily insulated No. 14 wire and placing it within the solenoid so that the two windings are parallel to each other. When the current is turned on the filament of the lamp will become incandescent.

In Auto-condensation, the body of the patient is in direct contact with one terminal of the d'Arsonval solenoid; the other terminal is connected to a large metal plate, insulated from the patient placed on a couch or chair. The precise interpretation of the phenomena of high-frequency condensation is not as yet satisfactorily explained, but the accepted explanation is that the patient's body becomes one armature of a condenser.

In the reduction of high blood pressure auto-condensation gives us the best and most lasting results and without cardiac depression.

Dr. Samuel Sloan of Glasgow, reported in the London *Lancet*, June 1907, the result of his extensive investigations as to the effect of the high-frequency currents upon the heart and blood pressure. Some of his conclusions follow:

1—"These currents cause at first, in all cases, diminished peripheral resistance.

2—"In all cases this is followed sooner or later by increased cardiac force when the current is given in therapeutic doses.

3—"The effects on the blood pressure and the pulse-rate of this double action will depend on the cardio-vascular stability.

4—"Should this be normal there will be no change whatever save an increase in blood flow giving rise to a slight elevation of the temperature of the blood.

5—"When the blood pressure is high for the individual's age and there is no apparent disease to account for it, I have observed that after several applications of the current the blood pressure is diminished and there is a corresponding improvement in the pulse rate.

6—"Upon rhythm the effects of electrification are marked. In some instances of intermittent pulse—radial only, or cardiac as well—the intermissions will diminish or disappear,

even in a case which had caused anxiety to the patient for many years. If the intermissions are recent, as from temporary digestive disturbance, they may cease after only two or three electrifications, along with the associated benefit of the current on the gastro-intestinal canal.

7—"When the pulse is variable before electrification it may become quite regular and steady immediately after.

8—"These researches offer sufficient evidence to establish my contention as to the tonic effects of high-frequency currents on the heart, a subject which is of the greatest importance."

Under auto-conduction and auto-condensation competent observers tell us that tubercular areas produced in healthy guinea pigs heal, leaving healthy scar tissue. Applied to human beings favorable changes take place. In general nutrition there is an increase in the arterial circulation and in the number of respirations; there is an increased diuresis and a better elimination of the excreta; there is an increase in organic combustion; the disproportions between uric acid and urea are brought to the normal ratio (1:40). The amount of oxygen in the blood is increased and may even exceed the normal physiologic limit of six per cent. Patients under treatment exhibit a better capacity for work and walking. Flabby muscles become firm. Apostoli reporting the results of treatment in 518 cases noted improvement in general health, increased energy, return of appetite, better sleep, improved digestion and disposition in patients with bad tempers. He claims it "a medicament for the cells and a powerful modifier of the general nutrition which it can at once promote and regulate.

REPORTS OF CASES.

Case 1. NEURITIS—The results accomplished in neuritis are best described in the following letter received from a grateful patient and printed in part with his permission.

"About nine years ago, I injured my right arm while alighting from a train, simply a slight blow on the elbow which resulted in a Traumatic Neuritis. The thumb, first two fingers and part of the arm were paralyzed for some five or six weeks. Since that time, the use of my hand and arm has been more or less restricted. Should I use my arm to any great extent it would result in severe pain, which generally seemed to increase at night or when lying down.

"I have tried various treatments such as baking with a Kelley heater, massage, hot packs, also electric treatments, but the results were not at all satisfactory as the pain continued; my hand would become numb and at times the fingers would cramp badly. During September and October (1913)

the pain became unusually severe and on October 24th at the suggestion of Dr. Schreiner I called to see you.

"I received thirty-three high-frequency treatments. After the first treatment the pain increased greatly, but the second produced more satisfactory results. After the third and fourth there was a very marked change, and while at times the pain entirely left me, I did at times have considerable pain. After the fourteenth treatment the arm improved rapidly. Since the first of the year (1914) there has been no recurrence of the pain, numbness, or cramps, and I have used my arm freely."

Case 2. INFECTION—Dr. S. infected right thumb of three months duration, two operations had been performed under nitrous oxid anesthesia. A sinus persisted from which pus discharged necessitating redressing twice daily. The thumb was swollen and painful and gradually getting worse so that he was becoming alarmed about it. A Roentgenogram showed involvement of the terminal phalanx.

Three applications with effluvation checked the discharge and the pain and swelling was almost nil. After the seventh application the sinus had closed and a cure affected.

Case 3. CHRONIC ARTICULAR RHEUMATISM—Female, aged 45. Referred by Dr. C. F. Howard. At the age of 15 she strained the right shoulder while lifting an invalid sister. It was painful thereafter for five years off and on.

The present trouble was first noticed in the fall of 1914. It commenced suddenly with pain in the right shoulder, while carrying a tray of dishes; it gradually increased so that at time of entry, April 3d, 1915, it was at times very severe, especially at night and in damp, stormy weather. Voluntary motion of the arm was almost completely lost and passive motion showed apparent ankylosis of the shoulder joint. Blisters and drugs had been tried by another physician with no improvement. A Roentgenogram of the shoulder showed a marked osteoporosis of all the shoulder bones; there was no apparent erosion of the articulating surfaces.

There was no fever or swelling in the joint at any time and no other joint was involved. There was some muscular atrophy from disuse. Hand dynamometer reading—right 15°, left 60°.

Twenty-two high-frequency treatments (auto-condensation and vacuum currents) were given, the last on June 23, '15, at which time pain had disappeared, motion was re-established so that she could comb her hair. Hand dynamometer reading—right 52°, left 80°. General health had greatly improved and weight increased.

Case 4. Male, aged 48. Referred by Dr. Jas. Croff.

His foot was injured on June 16th, '16, by a discharge of dynamite which went off under a plank upon which the foot was resting. On July 28th the soft parts of the foot were considerably swollen and congested, he could not bear even a small part of his weight upon it; there was loss of sensation in the heel.

Roentgen findings: A vertical fracture through the external border of the astragalus; comminuted fracture of the os calcis with 1/8th inch upward displacement of the fragment and longitudinal splintering of the inferior surface.

Treatment consisted of auto-condensation to improve metabolism and the application of the vacuum electrode to the foot. Improvement was noted from the first; after the third swelling had nearly disappeared; sensation was returning to heel; after the eighth he could wear his shoe and after the 23rd treatment he could walk short distances without support.

Case 5. PAINFUL SCAR TISSUE, NEURASTHENIA. Female, aged 32. Office work. Referred by Dr. Hendee.

Symptoms—Lack of energy, easily tired, depressed, insomnia, constipation, cold extremities. Areas of tenderness along the spine, violent pulsation of the abdominal aorta.

Following an operation upon the right kidney five years ago the scar had been more or less painful, especially the later part of the day.

Treatment consisted of auto-condensation and the application of the vacuum currents to the spine, abdomen and scar.

Progress—After the second treatment sleep was nearly normal; after the tenth, pain in the scar had disappeared as had also the tender areas along the spine. She was stronger and had more ambition and better spirits. Had to work from 8 a. m. to 9 p. m. "Stood it fine. Previously all in at 3 p. m."

Case 6. PROSTATIC HYPERTROPHY—The results accomplished are described in a letter received from a patient:

"My trouble, which must have been of long standing did not culminate into a serious condition until the spring and summer of 1913. I was reduced in weight 20 lbs. My rest at night was so disturbed that sleep was impossible. The frequency of urination would be every five or ten minutes, accompanied with considerable pain. There were nights when relief was obtained only by sending for a nurse and the use of the catheter. Finally I consulted with our family physician, Dr. Hoag, my first personal experience with a doctor in my life, and I am 63 years of age. The doctor at once diagnosed my case as prostatic enlargement and told me it was either electricity or the knife, and the former was pre-

ferable. During the first month's treatment the catheter was used a few times but the necessity decreased as the treatment progressed. By the 1st of the second month the improvement was so marked that I was rarely disturbed at night more than once. Feeling quite myself again I took but six treatments the third month and now my condition is so nearly normal that I am not conscious of my physical ailment. My gratitude is expressible."

Eye Injuries in Wars. Bourdier, *Le Progres Med.*, May 5, gives the following statistics: U. S. Civil War, total 1190, 0.5% of all wounds, 5.5% of wounds of head; Crimean War, 595; Italian War 97; Franco-German War, 1870, French statistics, 860, 0.86, 8.5%; Russo-Turkish War, 290, 2.21%, 18%; Graeco-Turco-Bulgarian War, 118, 0.85% of total wounds. It appears, therefore that the number of eye injuries has varied from 0.5% to nearly 3% of all wounds in previous wars and that wounds of the head comprise about 10% of all wounds. However, as the proportion of head wounds increases, those of the eyes do not increase proportionately. It is too soon to give anything like accurate statistics for the present war but it appears that the proportion of head wounds is not so great as might be expected from the greatly increased use of trenches, partly because even trench warfare involves a considerable amount of fighting in the open in attacks, partly because of the use of protective helmets, periscopes, etc., partly because, as compared with previous wars, even wounds received in trenches are largely due to artillery, grenades, etc., that is to so massive explosions that the effects are not limited to theoretically exposed, upper parts of the body. Thus de St. Martin observed 73 ocular lesions, comprising 1.36% of the total wounded; Genet, 82, comprising 2.4% of the total; the percentage varying from 0.2% for open fighting to 5.7% for trench warfare. The author's statistics at a hospital of evacuation at Verdun were 5.14%. Up to Dec. 1, 1916, the author saw at a single station, 1021 eye injuries, more than occurred in the entire War of 1870. For the nine months, Mch.-Nov. 1916, the author saw 238 cases of perforation of the globe, 132 due to war wounds, 106 to accidents. In the same period, loss of vision by destruction of the globe was noted in 71 cases, of which 8 were bilateral (total blindness).

Extraction of Intra-Pulmonary Foreign Bodies. J. Guyot, *Paris Medical*, Apr. 9, 1917, gives the general impression that extraction by forceps, before the X-ray screen, without anaesthesia, is simpler and more successful than is usually held.

Symposium on Pellagra.

DR. J. C. JOHNSON, Atlanta.

In this symposium, attention was directed to the following problems:

1. Theory of specific infection.
2. Theory of special means of conveyance, as by contagion, insects, etc.
3. Theories as to dietetic causes of special nature, non-drying oils, fermented corn, badly balanced diet, etc.
4. Theory that pellagra is not a specific infection nor due to special cause but is a state of poor nutrition, auto-intoxication, etc. Under this theory, can a special system-complex, marked by diagnostic signs and symptoms develop?

If our definition of pathology is correct, the symptom-complex of pellagra strongly suggests that specific infection plays an important role in its production. But if it is infectious the period of its incubation is anomalous, and there must preexist a condition of the body not congenitally a part, nor normally a product of vital action, and not usually present in infectious diseases. This latter, if true, explains why pellagra is not contagious, and also why efforts to transmit it have been unsuccessful.

The fact that we have not been able to isolate from the excreta of pellagrins bacteria of a pathogenic nature to which we might ascribe the disease cannot reasonably be accepted as proof that it is not infectious. There are many bacteria with which perhaps we are not familiar, or some of whose existence we may not know. The cause is not always manifest in a result. There are many bacteria in the intestines which in certain media are no doubt harmless, but which in other media may assume a virulent disposition. In 1911 we published the view that "Pellagra is a disease of perverted metabolism, having its first expression in the epithelial structures of the alimentary tract." Further observation has not changed our convictions in this particular. However, metabolism and digestion cannot be perfect or imperfect one without the other. Each is a sequence and a cause of the other and nutrition is the ultimate **condition** which results from their coordinate processes. Metabolism is but another name for the chemical and physical forces of the cells under the guidance of a directing agency. These forces have no self-control and cannot of their own accord change their relations, and hence cannot be the only agent in any disease. For these and other reasons we do not believe that any article of food or deficiency in any principle of food can

cause pellagra. In a few isolated cases diet may appear to be a determining factor in its production, and a special diet may be beneficial in the treatment. But many who are using the most appropriate food are developing, and some of them are dying of pellagra. In any effort to explain the phenomena of pellagra by errors in diet, it should be remembered that a lack of equilibrium is not classical disease, and that in health, the laws that control the commerce of the body are so fixed that when one organic principle is lacking in the food, another can be converted to fill its place. The readiness with which the body can adjust itself to unusual demands, so often seen in instances of prolonged fasting, forced or voluntary, as well as in diseases, furnishes to us ample proof that pellagra means something more than deficiency of either of the proximate principles of the body.

MARVIN H. SMITH, Jacksonville, Fla.

I have studied quite a large number of cases of pellagra in both Georgia and Florida, and at the present time I feel fairly well convinced that the disease is brought about by wrong eating—not necessarily an unbalanced diet though the histories of most of my cases show that they have indulged in an abundant amount of cheap carbohydrate diet, a fair amount of fat bacon or other animal fat (not butter) and a **very limited** amount of animal proteins, legumes, fresh fruits and vegetables.

My belief is that pellagra is a disease arising not only from deficient proteins, but a deficiency of vitamins. To support my belief, my experience has convinced me that these cases make progress when proteins are added to their daily menu, but more satisfactory progress, when some fruit juices, whole grain products and puree of fresh mashed tender vegetables can be given.

I am of the opinion that ultimately we will find that pellagra belongs in the same category with scurvy and beriberi, in which the absence of certain vitamins are a more potent factor than the absence of any particular food element.

DR. J. T. ROGERS, Savannah, Ga.

First I do not believe that pellagra is caused by the taking of any special kind of diet or by the lack of any special kind of diet. Pellagra is **undoubtedly influenced** by diet just as tuberculosis is influenced by diet. (2) I believe this disease

is caused by a specific organism or bacillus—possibly plasmodium.

Why do I believe this:—Because I have had patients from the same neighborhood. One “well to do” (wealthy) and **well nourished**, had plenty of the best food, **and ate it**, and another **poor** and **poorly nourished**, and while on the same medical treatment I’ve seen the well nourished “well to do” patient die in few months, while the poor and poorly nourished one got relief from all pellagra symptoms, and so far as we know may be cured.

We could write pages broadening and detailing, but you asked for answer in few words, and we feel that it is not necessary to go into detail.

Maternal Mortality From All Conditions Connected with Childbirth. Grace L. Meigs, Misc. Series No. 6, Children’s Bureau, U. S. Dept. of Labor. From 100 to 1913, registration-area statistics show 5.3-7.1 deaths from puerperal septicaemia, per 100,000 population and 7.1-8.5 due to other conditions depending on pregnancy and childbirth. The statistics of the whole country for 1913, show that of deaths of females between the ages of 15 and 44, tuberculosis leads with 26,265; and that puerperal septicaemia and accidents connected with pregnancy and labor follow with 9,876 deaths. The next highest is heart disease, 6,386. Apparently, exact statistics do not exist for reducing these figures to terms of mortality per 100 or 1000 deliveries but they represent approximately 5 maternal deaths per 1000 deliveries. We have at other times, estimated that with due allowance for indirect causes of death depending on child birth, the average modern American woman would be killed by bearing 10 children. For other countries, for various recent periods of which statistics are available, the maternal deaths per 1000 births are as follows: Australia, puerperal septicaemia 1.8, other causes directly due to pregnancy and confinement 3.4; Austria, 1.9 and not stated; Belgium, 2.3 and 3.5; England and Wales, 1.6 and 2.4; France, 2.4 and 2.8; Hungary, 1 and 2.6; Ireland, 1.9 and 3.6; Italy, 1 and 1.7; Japan, 1.4 and 2.6; New Zealand, 1.1 and 3.3; Norway, 1.5 and 1.4; Prussia, 1.5 and 1.8; Scotland, 1.8 and 3.6; Spain, 3.6 and 2.1; Sweden, 1 and 1.4; Switzerland, 2.4 and 3.2.

Gas in the Tissues. J. D. Morgan, and G. Vilvandre, Radiographers for the Canadian and British General Hospitals, respectively, Brit. Med. Jour., Jan. 6, emphasize the value of X-rays in the diagnosis, especially in cases not presenting the usual symptoms and signs.

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The Non-Combatants.

It is said that the old prejudice against the medical officer is appearing in training camps. Why?—

Inferior mental material? 25% or more of the whole medical profession are college men. All have had the medical course which is as long and, except in discipline, as hard as that at West Point or Annapolis. Unless waived by authority, on account of immediate needs, candidates go through the same training in camp as other reserve officers.

Inferior physical material? There is not the proportion of rejections as for privates.

Lower standard of patriotism? The country expects to get, by draft, 4% of the total male population or 20% of that of the first decade of adult life. It expects to get by volunteering nearly 20% of the entire man strength of the medical profession and more than 100% of the age group mentioned.

Playing safe? Statistics of this war show that the mortality of officers is higher than of privates, of medical officers highest of all, of aviation officers lowest.

A Non-Combatant? Yes, technically by army regulations, the spirit of which has been repeatedly violated in the interests of all by army surgeons who have led troops that they could not command. On the whole, in direct authority over subordinate officers and privates in the medical corps, exposure to military hazards, etc., the medical department is more closely analogous to the line than any other special department. It is not expected that any officer shall normally engage in direct combat.

Efficiency? Conservation of one's own forces is a fundamental in modern military science. In the past, deaths from diseases outnumbered traumatic war deaths, from 10:1 down to 2:1 in the most favorable circumstances. The present war presents hygienic and sanitary handicaps never equaled before except on a small scale. Yet the deaths from disease and the disease incidence, wherever subject to the control of an efficient medical staff, have been, if anything, less than for the same number of men in peace conditions. No other branch of the service has either by conservation of its own forces or destruction of the enemy's, achieved anything like this result, offensive and defensive devices having, on the whole, neutralized each other.

Carried to its logical limit, the old prejudice against the army surgeon would result as follows: 1. A general destruction of discipline, the private who fires a gun being the only real soldier and combatant; 2. A contempt for camouflage, the mathematic accuracy of artillery and particularly the barrage, for engineering and for every specialized development of modern warfare; demoralization of all special staff departments and return to 18th century military conditions; 3. A return to the novel and picture-play conception of heroism, unless sacrifices of the individual for glory, waving flag, shouting *Ee plooribuhs Yoon'm*. This sort of heroism is now rewarded by 5 days' imprisonment. Cheerful subjection to necessary risks is, of course, needed but the aim of every commander is to avoid useless waste of life of his troops.

Ethical Pre-Conceptions and the Physicians' Duty.

This article is addressed especially to young practitioners, because of a recollection of an early state of bewilderment in adjusting different ethical codes.

ALCOHOL. You may have been brought up to regard this agent as not only injurious but as essentially and peculiarly iniquitous. Without entering into therapeutic disputes, or discussing the indications and contra-indications of alcohol as a drug, you should, as a physician, regard it exactly as you would strychnine, sodium bromid or any other therapeutic agent. A person accustomed to taking alcoholic beverages, especially strong spirits of any kind, and more especially if he is accustomed to taking them regularly and without becoming intoxicated in the ordinary sense of the word, is very likely to have an attack of delirium tremens precipitated by any shock, even that of an acute medical ailment. Under such circumstances, the continuance of the

alcohol, in moderate dose, is a matter of prophylactic common sense.

TOBACCO. In many cases, severe nervous symptoms complicate surgical and medical cases, from the withdrawal of tobacco suddenly. The patient may be so imbued with the inappropriateness of tobacco to a confinement to bed for a serious trouble, that he may not even ask to be allowed to smoke or chew. In such cases, moderate indulgence often does no harm, on the contrary, it may avert nervous complications very much as moderate continuance of alcohol prevents delirium tremens. Do not forget that some women have the tobacco habit. Without advocating the use of tobacco, the medical adviser, in mild cases, should be guided by actual experience, general and individual and should not interdict its use simply as a reform measure. The physician should not yield to popular prejudice in regard to different forms of use of tobacco. Chewing and inhaling smoke obviously increase the absorption per unit of tobacco used and exaggerate the respective local effects. But it is unwise to attempt to reform a tobacco chewer for aesthetic reasons in an emergency. A package of cigarettes contains almost exactly the amount of tobacco contained in an average cigar and the flame is more exposed to oxygen. There is the same logic in advising a man against cigarettes and in favor of cigars or a pipe, as in advising him to drink large quantities of whisky instead of small amounts of beer.

SEXUAL AND OTHER IMMORALITIES. The physician, like the clergyman and teacher, is rightly expected to take a high moral ground, both in his personal life and in his influence. But, as an advisor, in a professional capacity, his first duty is his patient's welfare and he has no right to tell lies for their remote uplifting effect. To tell an inexperienced boy that masturbation is the principal cause of insanity, weighs heavily toward making it a cause in the particular case. To force an ill assorted marriage on a patient, for the sake of bringing about the conventional, respectable ending of an unfortunate amour, may result in untold misery. To attempt to secure moral living by exaggerated statements of venereal and other risks is not only wrong because it involves lying but it is, in the long run, futile. You can scare most inexperienced persons into believing anything for a while but most of them will discover the truth from subsequent observation and your influence will be gone. Do your duty as a physician, in all such cases and then add whatever admonition you may feel that you should, as a friend and moralist, but tell the truth.

THE RIGHTS OF THE WRONG KIND OF PEOPLE. You

have very likely been brought up to regard prostitutes, kept women, fast men, drunkards, saloonkeepers, gamblers and criminals as highly undesirable. But remember, that when sick or injured, these persons have the same claim upon you as a physician, as the most reputable members of society. This does not mean merely that you will refrain from an attempt at improving general standards of social morality by killing them off when they come under your professional care. Nor does it mean merely that you will not accomplish the same end by neglect. It implies the same promptness in attendance, the same courtesy and the same consideration that you give to any other patient. You will perhaps be surprised to learn that the most nefarious occupations are not inconsistent with kindness of heart, industry and many other virtues, that the depths of indecency do not always efface an appreciation of delicacy of manner and speech. In any vocation, one has the right to aim for the most desirable patronage but, in medical practice, it is questionable whether one ever has the right to close the door to a patient simply because he or she is not respectable, clean and "desirable." The ethics of the profession, established custom and the law itself, all support the contention that the relation of patient and physician is one of confidence, even of secrecy. You owe no detective service to the community from the opportunities of uncovering crime that arise in practice. On the other hand, you owe to no patient the commission of a crime under the guise of relieving suffering nor participation in a crime of other nature.

SOCIAL DISTINCTIONS. After the almost universal teaching of democratic principles in schools and in ordinary associations, the very frank recognition of social differences in the discussion of disease, is often a surprise to immature medical students. But, in medicine, facts rather than theories, are of paramount importance. One of the cruelest facts is that men run greater risk of disease and accident and greater risk of death when sick or disabled, because of poverty. On the other hand, one of the greatest merits of the medical profession is that, so far as it is itself concerned, wealth and social rank are as nearly as possible leveled when it comes to the actual combat against disease and death. But, in dealing with medical and surgical cases, democratic theories must often be set aside in favor of existing facts, in determining various details of the management.

Does it ever occur to the medical profession that advertisers deserve their special consideration? Quite aside from the fact that the great majority of advertisers in medical

journals have something to sell of real merit, and that, like a man before a court of law, as plaintiff or defendant, every advertiser ought to have the right to a respectful consideration of his contention, whatever our preconceived ideas, the men who are advertising their goods and services are bearing the greater part of the tax for one of the greatest means of education. Every periodical depends upon advertisers rather than on subscribers, for its support and there is no other educational factor so important as periodical literature in all its manifold branches—except class room instruction. Let the man who tries to shirk his share of the burden and bother you with circulars, know that his stuff goes promptly to the W. P. B. We are making no selfish plea, we do not care whether a firm advertises in this particular journal or not, so long as he is doing his part among journals generally. We ask no discrimination. Simply discard all circulars, excepting catalogues, etc.

BOOK REVIEWS

Books mentioned may be inspected at and ordered through this office. So far as possible, books received in any month will be reviewed in the issue of the second month following. Pamphlets, quarterly and similar periodicals, reports, transactions, etc., will, as a rule, merely be mentioned.

Birth Statistics, Registration Area of U. S., 1915. Bureau of the Census.

776,304 live births occurred—24.9: 1,000 population. The average death rate was 14: 1,000. The birth rates ranged from 21.1 for Me. to 26.7 for Conn. and Mich., the death rates from 10.1 for Minn. to 16.1 for N. H. If there were neither immigration nor emigration, the increase of population would be 1.1% a year or (calculated as compound interest) 11.08 + % for a decade, as compared with an actual increase of 20 down to about 18% for the last few decades. But, obviously, if the population increased only by births, the introduction of a highly vulnerable element would result in a considerably higher mortality. The mortality for infants under one year averaged 10%, ranging by states from 7 for Minn. to 12 for R. I. and, by municipalities of 10,000-25,000, from 17 for Newburyport, Mass. to 375 for Lackawanna, N. Y. The sanitary and social conditions of Lackawanna are conspicuously bad but, even so, the fact that this city has the maximum infant mortality for the whole country, is due to the large number of inmates of the infant asylum where a relatively high death rate is inevitable, in spite of the best care.

Therapeutics, Materia Medica and Pharmacy. Samuel O. L. Potter, A. M., M. D., M. R. C. P., 1st Major and Surgeon of Volunteers, U. S. Army. 13th edition by Elmer H. Funk, M. D., Philadelphia. R. Blakiston's Son & Co., Philadelphia; 960 pages, \$6.

The usual introductory matter, definitions, description of Galenicals, constituents of organic drugs, dosage, etc., occupies 50 pages. *Materia Medica* and *Therapeutics*, following an alphabetic arrangement, occupy nearly 450 pages; *Pharmacy* and *Prescription Writing*, over 50; *Special Therapeutics*, including an alphabetic index of indications arranged by disease names, poisoning, temperature, clinical examination of the urine, over 300 pages. The Appendix occupies over 100 pages and covers prescription Latin, tables of differential diagnosis, metric and other tables of weights and measures, and the Federal Narcotic Law. A general index follows. Neither space nor words are wasted and, by the classification and index, the division of the book by thumb indexes and use of black letters, rapidity of reference is insured.

Alcohol. Its Relation to Human Efficiency and Longevity. Eugene Lyman Fisk, Medical Director, Life Extension Institute, authorized by same, published by Funk & Wagnalls Co., N. Y. 216 pages, \$1.

We congratulate the author on having dealt with a trite subject, in the orthodox way, in an extremely interesting manner and in really finding something new to say.

Popular Manual of Vocal Physiology and Visible Speech. Alexander Melville Bell, published by the Volta Bureau, Washington. 3d edition.

The author starts with the actual possible positions of the speech organs, tongue, palate, lips, etc., and, somewhat after the method apparently adopted in forming the Hebrew alphabet, visualizes them by conventional signs which are really diagrams of the actual positions. Thus, related sounds such as B, P, V, F, and M are represented by "letters" of the same basic type, modified to distinguish between sonant and surd mutes and fricatives. The same modifying marks are used in the same way for the D and G groups of sounds. The general plan covers both vowels and consonants, though the type of "letters" for these two fundamental divisions of elementary speech sounds is equally marked. The great advantage

of this method is that it not only clearly shows the physiologic act required to produce an elementary sound but that it is elastic enough to cover any possible variation of sounds according to dialectic peculiarities and to denote any sound occurring in any language. Theoretically, at least, an entirely unfamiliar sound—for example the sonants corresponding to the two sounds of *ch* in German, which do not occur in any language with which the writer is familiar but which are occasionally heard in grunts of disgust—can be accurately transcribed and its pronunciation indicated. One point should be emphasized for authors of future general physiologies: this author clearly recognizes that vowels like consonants are produced in the oral cavity, not in the larynx, as has been falsely taught. Like every subject based on the interpretation of sensory stimuli, there is room for difference of opinion. For example, *Wh*, seems to the reviewer as clearly a consonantal diphthong, though the letters are reversed. The relation of *W* and *Y* to *H* is another point of divergence of opinion and others might be mentioned in regard to vowels and especially diphthongs. However, the author has devised a thoroughly rational system of transcribing speech and any dispute as to facts should be settled by phonographic study, including the appearance of tracings. Whatever slight modifications are required either by revision of the interpretation of sounds or for practical use in writing and printing will not disturb the foundations of the system.

The Practical Medicine Series, Chas. L. Mix, A. M., M. D., Editor; The Year Book Publishers, Chicago. Vol. 4, Gynaecology, Emilius C. Dudley, A. M., M. D. and Sydney S. Schochet, M. D., Editors, 232 pages, \$1.35 separately. Vol. 5, Paediatrics, Isaac A. Abt, M. D. and A. Kevinson, M. D., Editors; Orthopaedic Surgery, John Ridlon, A. M., M. D. and Chas. A. Parker, M. D., Editors, 240 pages, \$1.35 separately. Price for the annual series of 10 volumes, \$10.

This series is a standard review of current literature, too well known to require more than a reiteration of its value.

Progressive Medicine, quarterly, edited by H. A. Hare and L. F. Appleman, Philadelphia. Published by Lea & Febiger, Philadelphia, \$6 per year. Vol. 20, No. 3, Sept. 1, 1917.

The present issue contains a review of Diseases of the Thorax by Wm. Ewart; Dermatology & Syphilis by Wm. S. Gottheil; Obstetrics by Edward P. Davis; Nervous System by Wm. G. Spiller.

Diseases of the Spleen and Their Remedies Clinically Illustrated. J. Compton Burnett, M. D., London, Am. edition published by Boericke & Tafel, Philadelphia, 83 pages, \$1.

Along with a clinical review of diseases, the author discusses the appropriate homoeopathic remedies.

War Shock, The Psycho-neuroses of War, M. D. Eder, B. S., M. R. C. S., L. R. C. P., Late Temporary Captain, R. A. M. C. Published by P. Blakiston's Son & Co., Philadelphia, 164 pages, \$1.75.

Of 100 cases, of neurotic nature, 30 gave a history of previous personal or family taint, 70 were distinctly due to war shock. The various manifestations of hysteria are especially well discussed.

Ammunition for Final Drive on Booze. Louis Albert Banks, M. D., Boston. Funk & Wagnalls Co., N. Y., 402 pages.

It is to be regretted that the title is itself somewhat intemperate and that the ammunition is rather oratoric than statistic. Statistics are not neglected entirely but a work of this kind, issued at present, ought to deal more seriously with the statistic arguments of various kinds promulgated by the liquor interests. For example, in spite of the recent triumphs of prohibition in the way of legislation, a large increase in the consumption of liquors for the year 1916, has been claimed. If this is a fact, the title is too optimistic. Indeed, we fear that we are very far from the final drive and that years of hand-to-hand combat are still necessary.

Hand Book of Physiology, W. D. Halliburton, M. D., LL.D., F. R. C. P., F. R. S., London. P. Blakiston's Son & Co., Philadelphia, 930 pages, \$3.50. 13th edition.

This book is the lineal descendent of the physiology issued by Wm. Senhouse Kirkes of St. Bartholomy's Hospital, in 1848; and is, indeed, the 26th edition of that work. The original book was no mean contribution to medical science but had 705 pages and 97 illustrations. Various editors took charge of the revision from the 4th to the 13th edition, the next, in 1896 being the first issue under the present distinguished author. It is scarcely necessary to repeat the praise given to earlier editions as Halliburton's work has become a standard. What impresses us most forcibly is the fact that the advance of medical science does not necessarily

imply an increase in volume or complexity. Indeed, it rather conduces to simplicity and brevity. A definitely established fact, whose relations to other facts are known, can be stated more briefly and comprehended more easily than a supposition, especially when it later is shown to involve fallacies.

Malingering or The Simulation of Disease, A. Bassett Jones and Llewellyn J. Llewellyn, with a chapter on Malingering in Relation to the Eye by W. M. Beaumont. P. Blakiston's Son & Co., Philadelphia. 708 pages, \$7.

While this subject has been frequently treated in brief articles in medical and medico-legal periodicals and alluded to in various text books, we doubt whether a systematic work of comparable scope has hitherto appeared in English. The historic review carries us back into ancient literature and, under present war conditions, it is interesting to note that the feigning of disease to avoid military service was common among the Greeks, at first punishable by death, later by exposure to public gaze in female garments. The Romans cut off their thumbs instead of their trigger fingers. The influence of legislation, especially regarding various forms of insurance, is discussed at considerable length. While this book is especially timely on account of the large number of examinations being made with regard to fitness for military service, malingering is not so frequent to avoid military duty as for other reasons such as actions for damage or to secure insurance, for the sake of securing sympathy or attention or support, etc., nor is the view-point of the authors essentially military. The magnitude of the present work is not so much due to development of details as to the fact that malingering covers almost every disease and involves almost every system and apparatus of the body. One point should be especially emphasized: Everyone who, like the reviewer, is surprised that a volume of this size could be prepared on the subject, ought to read it. The authors have not produced so large a book simply by padding the comparatively brief notes on the subject which represent the knowledge of those who feel such a surprise. They are dealing with a subject which is very much larger than many otherwise well informed physicians imagine.

TOPICS OF PUBLIC INTEREST

Exemption of Medical Students. It is announced that medical students who have attended colleges for one year or more will be subject to draft but that, if drafted, they will be

allowed to continue their medical course—subject, probably to extreme military necessity—being considered as enlisted in the reserves. It is fair to say that this journal is one of very few in regarding the war as affording a favorable opportunity to reduce the number of physicians; and equally fair to state that our contention, based on statistic and other evidence, as to the existence of an over-supply of physicians, is not withdrawn. Military necessities will temporarily—for a period variously estimated at from a few months to several years—reduce the profession by about 20% and will also tend to diminish the graduation of students. The actual killing and disablement of military medical men will probably not be a marked factor; at the most, so far as can be judged from the experience of the other nations at war, it will amount to about 50% more than the normal depletion by death and incapacity in time of peace. Even if every medical officer were regarded as permanently removed from civil practice and if the exigencies of war removed every medical student, it would be at least five years before the problem of replenishing the medical profession would become acute. With all due respect, we beg leave to emphasize that the argument against drafting medical students and recent graduates, on the ground of need of internes, is not sound economically. We have become so used to the interne method of supplying public medical aid, that we have become blinded to the fact that it denotes an abnormal economic condition. Do not misunderstand us as implying that hospitals should not have a resident staff, or that the great majority of medical graduates should not have the benefit of this kind of practice, under responsible supervision, before engaging in private practice. The average medical graduate is 26 years old, he has had, at the very minimum, a high school education and from this up to a full college education; he has had four and possibly five years of intensive technical training. He is worth more than his board and laundry, with the possible addition of a hundred dollar check and a favorable acquaintance for a year's work, even if he does lack practical experience. He is worth just as much as a young engineer, clergyman, teacher, or even plumber or carpenter. If war conditions render it necessary for the taxpayers or the benevolent public to pay internes as any other young man, technically trained but inexperienced, is paid, it will be one of the best things that has happened for many years.

Required Interne Service. Six medical schools, all departments of universities, require a year of interne service before conferring the degree of M. D.: University of Minnesota,

Leland Stanford Jr., Rush (University of Chicago), University of California, Northwestern, University of Vermont. Pennsylvania and N. J. state laws already require a year of interne service and the following will require it: N. Dak. and R. I. in 1918, Ill. 1921, Mich. 1922.

Administration of Anaesthetic by Nurse, Under Direction of Surgeon, not a violation of law prohibiting practice of medicine by unlicensed persons. Ky. Court of Appeals, 194, S. W., 375. Frank vs. South.

Expulsion From County Medical Society. A voluntary association has the right to regulate the conduct of members and to expel but must do so in good faith and with provision for hearing. The expelled member must exhaust the remedies provided by the association before applying to a court of equity but may resort to suit after doing so or if the association does not provide for proper hearing. In the present case, the member was tried and convicted on the night on which charges were made; the trial was in violation of the by-laws of the society and the provisions for appeal were inadequate. Hence it was held that he had a right to apply to a court of equity for an injunction to restrain expulsion. Brown vs. Harris Co. Med. Soc., Texas Court of Civil Appeals, 194 S. W., 1179.

Law Regarding Sexual Disease Advertising. Section 1142 A of a law passed by the N. Y. legislature prohibits advertising concerning a venereal disease, lost manhood, impotency, seminal emissions, varicocele, self abuse, excessive indulgence, etc. The intent of the law is good but, as the Medical Record states editorially in its issue of July 28, it is so worded that it might be construed to apply to medical journals, as for example in the advertising of perfectly proper remedies. Moreover, while didactic or scientific treatises are exempted, as also advertisements and notices of incorporated hospitals, licensed dispensaries, municipal and the state department of health, there is a most unfortunate blunder—or possibly intentional qualification. The didactic or scientific treatises must not “advertise or call attention to any person or persons from whom or any office or place at which information, treatment, or advice may be obtained.” Suppose that Dr. John Smith contributes a scientific article on any of the subjects mentioned, to a medical journal, adds to his name, as is customary, the statement of a professorship in venereal diseases or of a hospital or dispensary appointment, or of the authorship of a book, that, in accordance with a common

sense rule, his city is appended and that, at the end of the article, likewise in accordance with precedent, his street address is given. This certainly calls attention both to the person and the place from whom at which information, treatment and advice may be obtained. Indeed, remembering the extensive and intensive ways in which laws in general are interpreted, it seems possible that specialization in genito-urinary and sexual practice may now be a criminal offense under the law of the state, at least unless the specialist takes particular pains to hide his light under a bushel.

In this connection, we may call attention to the federal liquor advertising law. As our readers have observed, we advocated that this law should, at the outset, have exempted medical journals and an analogous argument applies to the state law mentioned above. The principle involved is a broad one and susceptible of formulation: Any publication of a technical or scientific nature, maintained in good faith, should be allowed to publish any matter appropriate to its circulation. Matter, whether occurring in the reading or advertising pages that would be indecent for popular distribution, favors the cause of decency and morality when addressed to physicians, sociologists and others of similar training and intelligence. The discussion, even in an advertisement, of alcohol as a drug, inevitably calls attention to the fact that it ought not to be used as a beverage. Even the establishment of good faith is not especially difficult. It can easily be shown whether a medical or sociologic journal that discusses sexual problems, or alcohol, or narcotics or any other problem or thing that ought not to be brought too prominently to the attention of immature and untrained persons, is really distributed to the proper class or is catering to salacity or other improper tendencies and seeks a wide distribution.

Reasonable Salaries for Public Medical Service. Largely as the result of the efforts of the Chicago Medical Society (said to be the largest municipal medical society in the world), the Municipal Tuberculosis Sanitarium advertises the following schedule: All time service, 9 A. M.—5 P. M., first year salary \$2,500, increasing \$250 a year to \$3,500 for the fifth and subsequent years.

Open Hospital. The new Chicago Lying-in Hospital, has been opened with a capacity of 120 beds. Any reputable physician may treat his patients in the hospital. We feel strongly that any hospital which is public in the receipts of funds, whether they come from taxes or from appeals to

public benevolences, should be equally public so far as the recognition of the civic rights of physicians and of the mutual relation between physician and patient are concerned. And we hold it to be equally proper for any hospital to be private and to restrict the attendance on patients to certain physicians, so long as those interested secure the funds from their own pockets or from personal friends, or by the exercise of personal influence, so long as the institution is not represented as a public philanthropy. Our columns, as for any other question, are open to the expression of opinion.

Railroad Accidents 1916. Passengers killed 291, injured 8,008; Employees 2,941 and 176,923; Trespassers and others, 6,769 and 11,791. Total killed, 10,001, injured 196,722; excess over 1915, 1,371 and 34,835 respectively.

Poliomyelitis. At a conference with the Health Commissioner of Buffalo, Aug. 22, arrangements have been made for following up the cases of the 1912 and 1916 epidemics. Dr. Bernard Bartow will have general supervision of the work and cases will be operated upon at various hospitals or provided with prosthetic appliances, as required. It is estimated that there are about 100 children needing attention. During the epidemic of 1916, about 10,000 cases occurred in the state, more than 4,000 in July and nearly 6,000 in August. In 1917, 24 city and 17 upstate cases were reported in July and 14 and 30 respectively in August. No centers of infection are apparent either for the state or nation, this year. The press gives credit to the official representatives of the medical profession for the suppression of the epidemic. In one sense, we believe this credit is not deserved. The health authorities, with the support of the profession, took every possible precaution suggested by general principles, to suppress the epidemic of 1916 and with the result that the aggregate infantile mortality was lower than usual in spite of the epidemic but it may be questioned whether we know enough about the etiology of poliomyelitis to control it. As previously observed, sanitary and hygienic conditions seemed to have no bearing on the occurrence of cases and we might just as well admit that the relative cessation of the infection last year and its relative failure to reappear this year were either due to temporary exhaustion of vulnerable material or to some factor of which we have no knowledge.

A Peculiar Effect of Food Conservation. The City of Buffalo has been under contract to furnish the International Agricultural Corporation an annual minimum of 25,000 tons

of garbage for reduction at \$1 a ton. For the fiscal year ending June 30, only 19,000 tons were delivered and the corporation wants to be remunerated. Otherwise stated, a population of probably considerably less than 600,000 has consumed more than 6,000 tons of what in ordinary times would have been thrown into the swill tub; a utilization of about 20 pounds per capita per year, or of about 10 days' food supply.

Zinc Oxid. The Bureau of Chemistry, Dept. of Agriculture, reports that little C. P. ZnO is on the market. Most of the commercial samples were labeled "Not U. S. P....Containing small quantities of lead."

The U. S. Food Administration announces the creation of two advisory committees as follows: Public Health, Leonard P. Ayer, Herman Biggs, David T. Edsall, Cary T. Grayson, A. Walter Hewlett, T. T. Janeway, F. G. Novy, Richard M. Pearce, H. Gideon Wells, Wm. H. Welch, Chairman. Alimentation, C. L. Alsberg, R. H. Chittenden, C. F. Langworthy, Graham Lusk, LaFayette B. Mendel, E. V. McCollum.

Release of Medical Reserve Officers From Leases. R. R. Denny of the Denny Food Sales Co. is Chairman of a committee of the Chicago Rotary Club to investigate cases in which physicians who have volunteered for military duty are being held by landlords to the terms of leases. While comparatively few cases of lack of patriotism have been encountered, about 100 complaints are being investigated. Anyone interested is invited to communicate with Mr. Denny.

Civil Service Vacancies. We have received announcements of more or less desirable openings, too late for publication. As this is a frequent occurrence, we would advise those of our readers who are desirous of obtaining such positions, to notify us in advance, so that we may notify them by telephone or letter of future opportunities.

Suicide Statistics. The Metropolitan Life Insurance Co. states that among four million white male industrial policy holders, 620 suicides occurred in 1916, the rate being 15.3 per 100,000 as against 19.6 for 1915. Among nearly five million females, the rate was 6.3 for 1916, as against 7.5 for 1915. Nearly a third of male suicides were by fire-arms and more than a third of female suicides by poison. Among negroes, the rates for 1916 were 8.2 for males and 3.4 for females, also for industrial workers. Male policy holders show a lower

suicide rate than the population generally up to the age of 25, above that the rate is slightly higher. Female policy holders show a lower rate than the general population throughout.

U. S. Civil Service Positions. The U. S. Civil Service Commission, Washington, announce that several positions are open in the Indian Service at \$1,000-\$1,200, Panama Canal Service at \$1,800, Public Health Service \$480 for part time—\$1,800 for whole time, Coast and Geodetic Survey \$1,020 and subsistence allowance while on board ship at \$1-\$2.50 a day. No formal examination will be held but physical ability will be rated as 10 points, education, training and experience as 90 points. The requirements vary somewhat and for certain positions, senior medical students may qualify in advance of graduation.

Sale of Niagara Medical College Building. The old building on Ellicott Street, Buffalo, has just been sold. It is interesting to note that at the meeting of the stockholders, only one physician was directly involved, and he was not a member of the original faculty, all the rest being represented by their heirs, in some cases, two degrees removed. The first class graduated was 1886, the last, 1898. After this date, the school was merged with the Medical Dept., University of Buffalo.

Birth Registration Area. This was established in 1915, comprising the District of Columbia and 10 states, 10% of the area and 31% of the population of the country. Md., Va. and Ky. have recently been added and the attention being directed to the matter by military conditions is expected to bring 2/3 of the population within the area within the next two years. The fact that birth statistics can be collected retro-actively is indicated by the fact that a single physician, stimulated by the importance of accurate records in connection with the draft, has reported 450 births which have occurred in his practice since 1900.

Mayo Foundation. The regents of the University of Minnesota ratified unanimously, Sept. 15, the provisional agreement by which the Mayo Foundation at Rochester becomes the absolute property of the University, in perpetuity for higher medical education, research and investigation. Securities totaling \$1,650,345 were turned over to the University by Mrs. Wm. J. and Chas. H. Mayo.

Buffalo School Statistics. The registration figures of this year as compared with last year are:

High Schools.	1917.	1916.
Hutchinson	1,498	1,593
Lafayette	900	982
Masten Park	918	955
Technical	632	828
South Park	702	698

Totals	4,650	5,056
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Decrease, 406.

Vocational Schools.

Elm	116	92
Seneca	103	*...
Peckham	215	*...
Black Rock	60	*...

Total	494
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*No report of attendance for 1916.

Grammar Schools	46,087	45,916
School of practice.....	292	290
Teachers' training school.....	58	58
Truant school	3	0

The 62 elementary Roman Catholic schools last year had a registration of 26,031 while 1,629 were enrolled in private schools. The population of school age for the school year 1916-17 was 105,096, distributed according to language of parent as follows: English 46,334; German 21,331; Polish 22,878; Jewish 3,238; Italian 8,616; Scandinavian 653; Hungarian 1,120. 20 other nationalities 926.

Soy Bean—A Dangerous Statement. One of our contemporaries prints in the tabloid form of statement that is so apt to be copied widely, the advice that as this bean contains no starch, it is a valuable food for diabetics. How about the 9% of saccharose?

Food Supply of the U. S. Sept. 1. The Bureau of Markets gives the following statistics, which represent the reports of large concerns (number for each food shown in parenthesis) but not the absolute totals. Frozen beef (236) 116 million pounds; Cured beef (293) 31 million pounds; Frozen lamb and mutton (149) 3 million pounds; Frozen pork (259) 75 million pounds; Dry salt pork (389) 197 million pounds; Sweet pickled pork (481) 318 million pounds. (We suppose that this refers to pork temporarily preserved in brine so that it can be used as fresh pork. There certainly can be no

such enormous quantity of pork made into what is ordinarily called sweet pickle). Lard (482) 97 million pounds; Frozen poultry (482) 97 million pounds; Creamery butter (335) 99 million pounds; Packing stock butter (82) $2\frac{1}{2}$ million pounds; American cheese (373) 76 million pounds; Eggs (400) 6 million cases; Frozen eggs (148) 17 million pounds. It will be noted that these foods represent animal proteid and fat and, at a rough estimate, with due allowance for the substitution of one kind of proteid or fat for another according to supply available, the figures quoted represent about a month's supply for the whole country. This statement does not mean that every one can take all the fat he wants in the form of butter nor that the supply represents a month's rations in calories, without reference to the normal major use of vegetable proteid from cereals, and the calories derived from starch in the same cereals or other vegetable foods, sugar, etc. What is still more significant and encouraging, is that, so far as can be judged from the statements of firms reporting for the present and last year, there has been a considerable increase in most of the foods on hand.

The American Ambulance at Neuilly, near Paris, was opened in Lyceé Pasteur, Aug. 14, 1914 with 160 beds and a number of improvised ambulances made from Ford Chassis and packing boxes. It grew to 600 beds, nearly 100 ambulances and had 170 men in the ambulance corps. It was officially terminated July 22 with appropriate ceremonies, the equipment being turned over to the American Red Cross as American Army Hospital No. 1, under charge of Major Geo. P. Peed, M. D., U. S. Army.

Medical History of War. Col. C. C. McCulloch, Librarian of the Army Medical Library, Major F. H. Garrison, Asst. Librarian and Capt. John S. Fulton, Sec. of the Maryland State Board of Health, have been appointed by Surgeon-General Gorgas, to prepare the medical history of the present war. Major Garrison will write the text and Capt. Fulton will collect statistics. This prompt action is in line with that already taken by other countries. The History of the Civil War, in 6 large volumes, was not completed till 28 years after the war so that it was almost valueless except as history. It is the intention to issue the history of the present war with as little delay as possible, so as to render it available for practical medical and surgical purposes.

Reconstruction Hospitals. While in former wars, military medical responsibility ended with the discharge of the wound-

ed soldier after his wounds had healed in the immediate sense, the present idea is to extend the responsibility to the restoration of health and function to the maximum degree possible. Institutions for this purpose will be established at Boston, N. Y., Washington, Chicago (these four expected to be the first completed), Philadelphia, Baltimore, Buffalo, Cincinnati, St. Paul, Seattle, San Francisco, Los Angeles, Denver, Kansas City, St. Louis, Memphis, Richmond, Atlanta, New Orleans. These will be, to a large degree, orthopaedic hospitals but will also include provisions for manual training, re-education, use of prosthetic appliances, training in the use of special instruments and machines designed to supplement physical handicaps. The ultimate purpose is to return the maimed soldier to civil life so that he can engage in his former occupation or some substitute, without the economic handicap which has formerly affected the victims of war. Arrangements will be made with outside industries for training with special machinery when this can be done better than at the institutions themselves and an employment bureau will be established. At the outset, each hospital will accommodate 500, the number to be increased to 1000 as necessary. This whole matter comes under the department of military orthopedic surgery recently organized in the Medical Department of the Army. The following officers of the Medical Reserve Corps are in charge of the work: Maj. Elliott G. Brackett, of Boston, director of the department of military orthopedics to the Surgeon General; Maj. Joel E. Goldthwait, of Boston, director of military orthopedics for the expeditionary forces; Maj. David Silver, of Pittsburgh, assistant director of military orthopedics to the Surgeon General. The following, in conjunction with the above staff, compose the orthopedic council: Dr. Fred H. Albee, of New York; Dr. G. Gwilym Davis, of Philadelphia; Dr. Albert H. Freiberg, of Cincinnati; Dr. Robert W. Lovett, of Boston, and Dr. John L. Porter, of Chicago.

The Dept. of Military Orthopaedic Surgery will begin its work with patients near the firing line and will have special base hospitals in Europe. It will also provide for instruction of assistants in the encampments in this country and those specially fitted will take part in the examination of recruits and their rehabilitation when possible. Semi-monthly inspections of the feet will be included in this special work. A manual or military orthopaedic surgery will soon be ready for distribution.

Claims of Approval of food stuffs or their prices, by the Food Administrator, have been made or implied by certain

firms, in their advertising. Mr. Herbert C. Hoover denies that any such endorsements have been made, and will serve injunctions to stop the practice, if necessary. This is a reminder of the attempt to use the serial numbering of the Food & Drug Law as a guarantee by the government.

Information in re Medical Reserve Corps. The recommendations and acceptances for the different branches of the Medical Department to Sept. 17, 1917, are as follows:

Recommendations. Acceptances.		
Medical Reserve Corps.....	15,600	11,156
Dental Reserve Corps.....	4,004	2,491
Veterinary Reserve Corps.....	1,250	725
Sanitary Corps	277	146
Ambulance Corps	24	5
Total	21,155	14,523

In regard to the Reserve Corps and the Red Cross. Medical men may attach themselves to the Red Cross and be assigned to strictly Red Cross duty. If so, they occupy the status of civilians and have no connection whatever with the Army. On the contrary, those who are assigned to Red Cross Base Hospital Units for instance, must be commissioned in the Medical Reserve Corps, and occupy exactly the same relation to the Department as any other officer of the Medical Reserve Corps. They are subject to such assignment as the Department finds necessary, although naturally they will be retained on duty with their unit unless unforeseen circumstances arise which make their separation from it necessary. The officers who are on strictly civilian duty with the Red Cross are, of course, not paid by the Government and do not wear military uniforms.

R. B. Miller, Lieut. Col., Medical Corps, U. S. Army.

By direction of the Surgeon General.

Note: The figures kindly supplied by the Surgeon General's Office, have an important bearing on the proposed extension of the draft of medical men as such. It will be noted that about 75% of the total number of medical reserve officers estimated as necessary have actually been recommended for commissions. Considering that there is inevitably some delay between the actual time of volunteering and the completion of examination, passing upon reports, etc., preliminary to recommendation to the Adjutant General for commission, (in a case personally known, amounting to two months) and that not all volunteers are eligible, it may be assumed that as many men have volunteered as would have

been called by draft. Reference to the second paragraph implies also that a considerable additional force has been raised for Red Cross work, aside from the Medical Reserve Corps proper. The criticism has been made that, after volunteering, physicians do not accept commissions. While this breach of courtesy, to say the least, has occurred, it should be remembered that about two weeks must elapse between the recommendation for and the receipt of acceptance of a commission and it has been stated that 100-150 applications are being received daily so that the acceptances at any rate are somewhere about 1500-2000 behind the recommendations. The fact is that the volunteer system for medical officers has already supplied the demands of the regular army and national guard (some 800,000 troops), provided or anticipated much of the estimated requirement of base hospital service, with a reserve nearly or quite adequate for the first draft. We do not oppose the drafting of medical men as a future expedient but believe that the decision of this question should rest solely with the proper authorities. We feel, however, that, with due allowance for inevitable delays, personal and official, the medical profession has made good on the volunteer system.

The Meanest Man. We enter in the contest for the prize, those who have taken advantage of the patriotism and industry of girls, to raise the price of knitting* needles to an exorbitant standard.

SOCIETY MEETINGS

Brief reports and announcements of meetings of societies of Western New York, and those of general scope, are requested from Secretaries. Copy should be on hand the fifteenth of the month. Full transactions will be published at cost of composition.

DOCTOR: Is your Society properly represented here? If not, please bring our standing announcement to the attention of the members.

The Eighth District Branch of the Medical Society of the State of N. Y. held its 12th annual meeting in Alumni Hall of the University of Buffalo, Sept. 13 and 14. Beside the regular scientific and business sessions, clinics were held at the General and Municipal Hospitals and Laboratory Demonstrations at the State Institute for Study of Malignant Disease. As the full report will appear in the State Journal, we feel that it is only courteous to mention the meeting briefly.

The Elmira Academy of Medicine held its regular meeting in its rooms in the Federal Building, Elmira, Sept. 5. Program: Iritis, L. D. Mottram; Cardio-therapy of the Obese, C. W. Lieb; Use of the Fluoroscope, N. A. Soble. R. B. Howland, Pres.; O. J. Bowman, Sec.

The Chemung County Medical Society held a regular meeting Sept. 18 in its rooms in the Federal Building, Elmira. Dr. Harvey P. Jack of Hornell read a paper on Bladder Disease of the Aged; Dr. Henry J. Mulford of Buffalo, on the Mind of the Child. Dr. Clyde Carey, Pres.; Dr. Mabel Flood, Sec.

The American Public Health Assn. will hold a war meeting in Washington, Oct. 17-20, this meeting supplanting the announced annual meeting at New Orleans, Dec. 4-7. The papers will deal with food supply, communicable disease among soldiers, venereal diseases, the health of the civil population, all with special reference to war problems. Non-members will receive the preliminary program on application to the association at 128 Massachusetts Ave., Boston.

OBITUARY

Readers are requested to report promptly the death of all physicians in Western New York, or former residents of this region, or graduates of any medical school in Western New York, and to notify the families of the deceased of our desire to publish adequate Obituary notices.

Dr. Wm. L. Dickinson, Buffalo 1879, died at his home in Saginaw, Mich., June 8, of leucocythaemia, aged 63. He was formerly Prof. of Rectal Diseases in the Mich. College of Medicine and Surgery of Detroit.

Dr. Frank Leon Waldorf, Syracuse 1910, of East Syracuse, died at the Hospital of the Good Shepard, Syracuse, Aug. 14, aged 30, of septicaemia due to an infection of the finger at a necropsy 4 weeks previously. He was Pathologist to the Hospital.

Dr. James Clark Earle, Buffalo 1887, died at his home in Olean, Aug. 7, aged 51. He was formerly Chief Surgeon of the Northern Division of the Pennsylvania R. R. and a member of the Olean City Council.

Dr. Frederick Walter Smith, N. Y. University 1873, died at his home in Syracuse of cerebral haemorrhage, July 31, aged 58. He was Obstetrician to St. Joseph's Hospital and Health

Officer of Syracuse since 1902, having previously had the title of Health Commissioner, 1891-97. He was on the State Board of Health from 1895 to 1901 and had been coroner of Onondaga Co. for several years.

Second Lieutenant Edward Revere Osler, son of our Associate Editor, died about Sept. 1 of wounds received in service in Belgium, aged 21.

Dr. Morey C. Collier, Albany 1906, died suddenly at his home in Painted Post, Sept. 15, of cerebral haemorrhage.

Dr. Jacob David Wurtz, Geneva 1867, died at his home in Modena, N. Y., Apr. 26, aged 71. The cause of death was cerebral haemorrhage. He was Clerk of Ulster Co. for 12 years and was a member of the N. Y. legislature for two sessions.

Up to Sept. 18, we have noticed the deaths of 7 members of the Medical Reserve Corps, 3 from disease, apparently before being called to service; 3 from accidental causes while in training camp (gun-shot, collision between auto and trolley, lightning); 1 during active service in France, from an aerial, hostile bomb, apparently deliberately dropped on a hospital.

PERSONAL

Dr. Edgar A. Forsyth announces the removal of his office to 471 Virginia St.; Tupper 157.

Dr. E. M. Manwaren of 232 Ferry St., Buffalo, returned to Buffalo Sept. 5, after an extended visit to relatives in Oswego.

The house of **Dr. Wm. L. Phillips** of Buffalo, was ransacked by burglars during the absence of the family, on the night of Sept. 3.

Dr. Herbert A. Smith of Buffalo, Captain, M. R. C., is absent from the city on service.

Dr. James J. Clements of Buffalo has been commissioned 1st Lt., M. R. C.

Dr. Edward Durney of Buffalo has been appointed Deputy Health Commissioner during the absence of **Dr. Arthur C. Schaefer** on Military duty with the 74th Reg. **Dr. Schaefer** is a Captain in the medical corps.

Lts. J. A. Bennett, Elmira; I. W. Livermore, Gowanda, and G. E. Stevenson, Penn Yan, have been ordered to Ft. Ethan Allen, Vt.

Dr. Paul Betawski of Bath, Chief Surgeon of the Soldiers' Home, has resigned his position and accepted one as 1st Lt. in the M. R. C. On leaving for the training camp at Ft. Benjamin Harrison, he was accompanied to the train by a large number of veterans, officers and employees of the Home and citizens of Bath.

Dr. F. A. Walder of Lockport has been commissioned 1st Lt. M. R. C. and has gone to Ft. Benjamin Harrison.

A Company, Tonawanda Home Defense Corps, includes the following physicians: H. S. Wende, Mess Sergeant; J. Albert Hobbie and Herman U. Berger, corporals.

Dr. H. R. Gaylord of Buffalo, Major, M. R. C., is stationed at Allentown, Pa. He was in Buffalo the middle of Sept. to direct the physical examination of recruits.

The following members of the medical profession of western N. Y. have been ordered to Ft. Benjamin Harrison: Lts. F. H. Mildrew, Auburn; W. L. Weeden, Clifton Springs; R. S. Barry, J. L. Bishop and F. J. Talbot, Niagara Falls; C. A. Greenleaf, Olean; L. J. Barber, B. H. Dike, P. M. Parker, Rochester; Chas. A. Joy, Sonyea; R. S. Simpson, Lyons.

Lt. D. S. Childs of Syracuse has been ordered to Camp Travis, Ft. Sam Houston, Texas, as roentgenologist. Capt. U. S. Kann of Binghamton has been ordered to similar duty at Camp Wadsworth, Spartansburg, S. C.

The following have been ordered to duty at Syracuse: Major E. S. Van Duyn, Capt. Archer D. Babcock and Lt. B. C. Doust of Syracuse.

Lt. Edward L. Hanes of Rochester has been ordered to Washington Barracks to make examinations in his specialty.

Dr. Joseph Brumberg of Buffalo has been commissioned 1st Lt. in the M. R. C.

Dr. Albert Warren Ferris has finished his work as Superintending Director for the State of N. Y. at the Saratoga Springs Reservation and has returned to his position on the medical staff of the Glen Springs, Watkins, N. Y.

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ORIGINAL ARTICLES

The right is reserved to decline papers not dealing with practical medical and surgical subjects, and such as might offend or fail to interest readers. Contributors are solely responsible for opinions, methods of expression and revision of proof.

Abdominal Emergencies.

By STEPHEN Y. HOWELL, A. M., M. D., M. R. C. S. Eng.

Before we enter upon the formal consideration of our subject it will be interesting and, perhaps, profitable to briefly summarize, by way of prologue, the remarkable fetal changes which terminate in the pericardial, pleural, abdominal and scrotal sacs as we know them in practice. Very early in its intrauterine life the body of the fetus contains a single compartment, or space, lying between the primitive gut and the rapidly growing body-wall. This cavity, the coelom, is lined with a thin layer of mesoblastic cells, or mesothelium, from which is later developed the serous membranes. High up in the cervical region, in close apposition to the overlying heart, is the septum transversum which receives its phrenic nerve from the adjacent cervical plexus.

As the remarkable migration from the neck to the thoracic bottom occurs, the phrenic nerve progressively lengthens; the septum transversum, now permanently located, is converted into the adult diaphragm by the muscular contributions from the dorsal and ventral plates, and the peritoneal cavity is established.

In like manner the testes migrate from the sites of the Wolffian bodies to their permanent scrotal compartments, drawing with them their nerves from the upper lumbar region and their serous tunics from the peritoneum. Pushing into the common coelom from behind as they develop, the heart and lung-buds are covered with the double serous folds which line the pericardial and pleural cavities.

Diverticula from the primitive intestine, archenteron or

mid-gut are carried into the growing cephalic and caudal extremities of the fetus, forming the fore-and hind-guts respectively.

From the fore-gut are formed the pharynx, oesophagus, stomach, and the duodenum as far as the orifice of the common bile-duct. Distal to this point, the alimentary canal is differentiated from the mid-gut, up to the splenic flexure; while from splenic flexure to anus the hind-gut is represented.

In the abdomen, then, are associated the intestinal tract from lower oesophagus to rectum, with its budding glandular offshoots—liver and pancreas, as well as the more purely mesoblastic spleen and genitourinary organs. While some of these visceral tenants, the kidneys for example, are clothed merely on their ventral surfaces by the dorsal, or visceral, layer of the mesothelial sac, the primitive gut—a fraction of an inch in length—and its median dorsal mesentery, ranging freely forward, are at first completely invested.

And when we familiarize ourselves with the uniform rotations and displacements which Nature employs in her efforts to meet the growing demands for space of a digestive tube which lengthens some twenty feet, the mysteries of the peritoneum, which gloomed our early student-days, are satisfactorily solved.

That this particular crowded compartment, then, should afford a most fertile field for pathologic happenings, that it should prove the chief income-producer of the surgeon, are facts which should call for no surprise.

Consider the accidents and working-strains to which these abdominal organs are being constantly subjected! From the savage to the most gifted human, promptings of appetite and thrilling messages conveyed by the gustatory and olfactory nerves to appreciative cortical centers, despite the warnings of precept and experience, govern both the swallowing rate and the choice of ingesta. But, unless sterilized by heat or otherwise, each bolus of food introduces its quota of bacterial stowaways—some, doubtless, upon evil bent.

As the slated roofs of our homes protect from fire, so do their epithelial and endothelial investments defend our outer and inner body-surfaces, however involved may be Nature's architecture.

And, just as the absence of a single slate may imperil the home when threatened by flame, so may even microscopic epithelial defects, resulting from mechanical, chemical or necrobiotic agencies, extend the right hand of welcome to microbial intruders.

The wonder is that Nature's marvelous provisions should

be at all adequate to the strain of keeping the digestive tube effectively at work under conditions seemingly so adverse. And yet the scriptural three-score-years-and-ten of maltreatment, injury and neglect to which the stomach and intestines are ignorantly subjected, even by the most enlightened of us, are survived by a surprising per cent. of mortals, and that, too, without any breakdowns of surgical importance. In like manner the strains and stresses undergone by the urinary and reproductive organs have filled many volumes of professional literature, though consequent lesions of vital import afflict but a small minority.

When the pathologic break does come, however, and the organic laboratory of frail flesh, yielding to adverse influences, evokes symptoms and conditions which rank the case as an "abdominal emergency," we are confronted with questions of the most serious import. Indeed, no class of cases call more imperatively for professional ability and strength.

Upon a correct diagnosis, followed by timely and proper treatment, hangs the issue—life or death. All of us will recall emergencies of this nature,—the wear-and-tear involved in the beneficent struggle, the buoyant satisfaction or horrid disappointment and depression evoked by the outcome.

Today, however, the technic involved in the preparation and operative treatment of abdominal emergencies is fairly uniform, and the time and space at our disposal forbid elaborate descriptions of details which are presumably, familiar to us all.

In the matter of diagnosis, however, a further brief trespass upon your patience and good nature may, I trust, be tolerated.

To correctly diagnose diseased conditions within the body-cavities is a goal toward which progressive medicine has ever struggled, and ability in this line always marks the leader. Why? Because it proclaims a general efficiency. It demands: first, mastery of the normal structure and functions of the body; then, a familiarity with the multiform changes in these incident to disease, together with their manifestations; and, finally, the ability to employ the most effective methods in locating the trouble. The pride of the illy equipped "snap-diagnostician" must necessarily be often humbled.

Dr. William J. Mayo is fond of relating, apropos of this, that during his earlier professional career, when he was in general practice, he felt perfectly qualified to diagnose, positively, any internal disorder; but, when it came to skin-diseases—well, he passed.

A patient who employs one of our profession rightly ex-

pects a correct diagnosis of his case and proper treatment. Should death result, despite the fulfillment of these conditions, no blame can properly follow.

How far short of this ideal fall the rank and file of internists and surgeons, however, is well shown by an article which appeared recently in the *New York Times*. It was the report of a committee of investigation, declaring that 47 per cent. of the autopsies made in the hospitals and dispensaries of New York City revealed diagnostic errors. Indolence and indifference, rather than incapacity, doubtless account for these startling figures—a record which is, I fear, not peculiar to the Metropolis.

Under abdominal emergencies may be grouped, we assume, all those pathological happenings, foreseen or unforeseen, which suddenly threaten life and demand immediate relief, medical or surgical.

As a rule, close concentration upon the history and clinical signs will reveal the nature of the trouble. But, again, after exhausting every diagnostic means, including X-ray and laboratory tests, one is forced not infrequently to clear up the mystery by an exploratory operation.

In November last a young married woman, aged forty-five, living in the country, experienced a few days of malaise attended with loss of appetite. Suddenly she was seized in the night with a severe chill, "ached from head to foot," as she expressed it, vomited frequently; and, on the following day, black diarrhoeic stools of offensive odor began. Typhoid fever was suspected, as the water in the farm-well had been low; she was brought to a local hospital by her physician and committed to my care. When I saw her, on Tuesday afternoon, the abdomen was markedly tympanitic, temperature 102, pulse rapid and hard and patient decidedly septic. She informed me that after her initial chill she had suffered from a severe headache and general abdominal pains, the latter usually dull in character, most marked in the splenic region and relieved by each movement of the bowels. Moderately deep palpation revealed no unusual tenderness in the hepatic region, and but slight pain in the right lower quadrant of the abdomen. In the splenic area, however, pressure caused some pain, and the patient said that from the beginning this region had given her most distress. Widal and diazo reactions were negative; blood-count showed 23000 leucocytes, 93 per cent. of which were polymorphonuclears.

Pus was evidently present, but where? Three consultants were in the dark; but one finally declared his belief that pus would be found post mortem in the appendiceal region. No tumor could be felt; but, to clear up this point, I resorted

to lumbar section under local anesthesia. Through an incision above the right iliac crest I dissected down to the subserous areolar plane, pushed the left index finger down behind the appendix, and explored directly and bimanually, but with negative result. When in doubt concerning the condition of the appendix, this procedure, by the way, has proved of great value to me in cases whose condition forbade any avoidable surgery.

On the following afternoon, three days after her entrance into the hospital, the patient died. The autopsy showed a normal appendix, several patches of enteritis in the left colon, just below the splenic flexure, no apparent disturbance of the extrahepatic biliary organs, but a liver simply bathed in free pus. A primary infectious colitis had evidently lighted up the metastatic perihepatic suppuration, via the portal vein; and, under the circumstances, the lethal issue was excusable.

A certain number of abdominal cases, properly classed as emergencies, always have been, and probably always will be, unavoidable; but in the large majority of these it is delay, the so-called expectant treatment, that is directly responsible for fatal endings.

Acute obstruction of the bowels, for example, despite all the advance in technic which has marked the past thirty years, has a mortality but little changed for the better. Given a case exhibiting the classic diagnostic symptoms of pain, nausea and vomiting, the medical attendant is only too apt to run through the gamut of remedial measures. Buoyed up by the hope of final success and lured on only too often by the false symptomatic relief afforded by opiates and the soothing, insidious, fear-abating approach of that angel of death,—toxemia, the hours and days are allowed to pass. Suddenly the truth becomes but too apparent, the surgeon is summoned. Handicapped and protesting, he operates upon one practically dead, and another failure is checked up against his art.

In gastric ulcer, even with its grim potentialities, medical treatment is usually both justified and proper in the early stage, since healing frequently results. Duodenal ulcers, per contra, though healed will recur; and, after a period of suffering averaging twelve years, according to the late Dr. Murphy, surgery is resorted to.

As in appendicitis, operative interference is called for as soon as a duodenal ulcer is detected, and the first colic of a cholecystitis expresses a like demand.

In tubal pregnancy early operation puts a timely stop to

the blind activity of the developing ovum and prevents the later hurry-up call of hemorrhage.

When finally nested in a follicle of the decidua serotina, the ovum sets about providing for its further placental maintenance through the phagocytic power of its external layer of syncytium. In like manner, when arrested en route in the Fallopian tube, the syncytial cells covering chorion and villi rapidly eat their way through the tubal tissues; and the eroded vessels, flooding the abdominal cavity, hoist the final peremptory signals of distress.

The early removal of pelvic tumors anticipates the dangers which threaten through malignant degenerations and twisted pedicles; indeed, few exceptions such as gastric ulcer can be adduced which favor delay in operative interference where experience has taught us that further evils are risked by such a course.

The five diagnostic methods of Dr. John B. Murphy* (*See Clinics, Vol. 1, No. 3, p. 459) are of great value to both internist and surgeon in the differential diagnosis of abdominal diseases. Those who are familiar with the great Chicago clinic will recall the frequent and enthusiastic references of that brilliant and talented teacher to these procedures, and his confidence in their findings. The results of trial and elimination during many busy years, they have proved their worth and can be confidently recommended to any practitioner whose self-confidence and success in this field are of the average order.

These methods are: (1) "fist percussion of the kidney," (2) "hammer-stroke percussion" in suspected disease of the gall-bladder or ducts, (3) "deep-grip palpation" of the gall-bladder, (4) "piano percussion" for the detection of small fluid exudates, and (5) "comparative bimanual examination" or simultaneous palpation of both the iliac fossae in suspected acute appendicitis.

Both gastric perforation and acute pancreatitis may be associated with pain, vomiting and collapse, varying in degree, but the absence of general abdominal rigidity and the early appearance of tympany favor the latter condition. It should further be borne in mind that jaundice evidences complete obstruction of the common duct, its duration and degree depending upon the length of the total occlusion; that a concretion causes colicky pain only when in motion, whether it be in the intestine, ureter or bile-passages; and, finally, that the abdominal cavity has frequently been opened for the relief of referred pain due to metastatic spondylitis or other spinal disorders.

When associated with pregnancy, appendicitis becomes a

complication fraught with potential evil. It is a situation which may aptly be likened to a fire adjacent to a storehouse filled with explosives when pus forms about the appendix, and leads to a mortality which has been estimated at forty per cent.

Irritated directly and through its reflexes, the uterus is prone to contract and an abortion or miscarriage frequently follows. Hematogenous infection of the placental site is followed by a rapidly spreading metritis, septic phlebitis, embolic metastases and death.

When confronted with a case of appendicitis associated with pregnancy operate early, before pus has formed, or during a quiescent interval. Remove the inflamed appendix as quickly as possible, after a minimum exposure and handling of intestines, close the wound expeditiously and get your patient back in bed. Such a course will be least apt to interrupt gestation.

To determine the presence of pregnancy in doubtful cases calling for the operative relief of appendicitis or uterine fibroids, for example, the sero-diagnostic test of Abderhalden is of great value.

Though admittedly fallible, as are all tests, in fact, whether they bear the name of Widal, Wassermann or other laboratory expert; yet, a positive reaction is quite reliable, especially when corroborated by the history and clinical findings. The technic involved in its preparation and use, however, demands such delicacy and painstaking exactness that none save conscientious experts should be commissioned to make the test.

Abderhalden bases his reaction upon the assumption that a certain protein body is thrown into the blood of a pregnant woman by the syncytial chorionic cells, a product of their metabolism. Proteolytic to that particular cell-protein is an enzyme which is present in the blood-serum of the patient, produced somewhere in her body by the tissue-cells. This specific reaction of Abderhalden is a test for the presence of that enzyme in the blood-serum.

In cases of intestinal obstruction operative interference should be undertaken under local, rather than general, anesthesia whenever this is practical, and regardless of preparatory gastric lavage.

The longer the obstruction has persisted, the more imperative the rule. The stomach and those intestinal coils proximal to the point of obstruction in strangulated hernia, for example, are gradually filled with an astonishing amount of fluid—feculent, toxic and often offensive in character. When the patient is rendered incapable of intelligent action in his

own behalf by general anesthesia, vomiting, should it occur, is very apt to result fatally. A prolonged flood of liquid material pours quietly from the mouth of the unconscious, weak and toxic victim; and assistance, however intelligent, is only too often unable to forestall the verdict: "drowned in his own vomit."

Finally, and apropos to this advice, Dr. Bevan, of Chicago, calls attention in a very recent article* (*Surgical Clinics of Chicago, Vol. 1, No. 1, p. 21) to an American synthetic, called "Apothesine," which is now being tested by 100 American surgeons before its general introduction to the profession of this country. It is said to excel novocain in merit. Used in the same strength, and with a like proportion of adrenalin as the latter German synthetic, it has proved to be non-toxic in amounts up to 150 c.c. and neutral in regard to healing. Since it can be boiled for five or ten minutes without deterioration, and produces anesthesia lasting about an hour, this new anesthetic bids fair to replace, in the near future, the beneficent contribution of that nation, the home of Kultur, which is now anathema, since she turned her face from the ways of righteousness to follow the devious paths of evil.

501 Delaware Avenue.

Blood Pressure. A. G. Browne, Jr., Charlotte Med. Jour., July, reviews the subject and gives the following standards: Under 1 year, 71 m.m.; under 1 year, 73 m.m.; under 2 years, 79.3 m.m.; under 3 years, 81 m.m.; under 4 years, 83 m.m.; under 5 years, 86.5 m.m.; under 6 years, 88.5 m.m.; under 7 years, 89 m.m.; under 8 years, 93 m.m.; under 9 years, 100 m.m.; under 10 years, 104 m.m.; under 12 years, 105 m.m.; under 20 years, (male), 120 m.m. (For any two years of age after this add 1 m.m. to 120 m.m.; so at 30 years, 125; at 60, 140.)

Late Pregnancy. R. G. Hann, Jour. of Obs. & Gyn., Sept. 1902, reported a woman who gave birth to her 13th child at the age of 49, three years after cessation of menstruation. M. E. Bove, Maple Ridge, Mich., Clin. Med., April 1917, reports a woman aged 53 in the 4th month of pregnancy. Her mother bore 25 children to 4 husbands, the last child at the age of 65. (Critic & Guide, June.)

Caffeine Citrate in Strangulated Hernia. Ortega, A Medicina Contemporanea, Feb. 4, employs this drug, 10 c.g. every quarter hour till 1 gram has been given, to stimulate contractility of the intestinal muscle.

Uric Acid From Day to Day.

By JOHN C. WARBRICK, M. D., Chicago.

It has often been stated that eating meat is injurious, that it is poisonous and that it is the chief agent in causing uric acid to form in the body.

Judging from these statements one would almost be led to believe at first that uric acid is a real factor in causing some of the numerous diseases of the body.

Dr. Haig of London, Eng., supposed to be the greatest authority in the world on the subject of uric acid, has for many years along with a few others denounced meat as being harmful and as the real cause in the production of uric acid in the body.

When these statements are made by an authority recognized the whole world over such as Dr. Haig, and which no doubt many medical men have believed for years to be true, it would seem then possibly to be of little or no avail for anyone to state anything different on the subject.

Dr. Haig it seems has examined thousands of specimens of urine to prove that his theory is correct, which may be the case according to the way he looks at the matter, and I suppose it would hardly be of any use in trying to convince him, there is another side to the question, and that sufficient evidence can be produced to prove his statements are not in accordance with the facts.

It may be stated, and it has been proved many times, that it is not necessary to have uric acid in the system, simply because one is accustomed to eating meat.

From my long experience in examining specimens of urine I have found that the presence of uric acid is not nearly so common as might be thought. Anyway if a little uric acid is occasionally found in the urine it can hardly be considered of much consequence and does not tend to produce marked symptoms of any kind judging from close observation.

It is somewhat of a puzzle for me to understand just how Dr. Haig came to the conclusion he has regarding uric acid, and then to have them accepted generally as correct, while all other theories it would seem are of no account.

The mere statement that eating meat causes uric acid to form in the body is not based upon facts, nor is it consistent with scientific reasoning of any breadth of thought, so it must therefore be considered somewhat erroneous as can and has been proved more than once.

Under certain conditions it may be said, the eating of meat may cause some uric acid to form in the body, and under

certain conditions it may not do so. Haig's theory, it seems to me, is rather one sided, and not in accordance with the real facts of the matter, for he has looked into the subject in one way only.

After some careful investigations along this line, I have come to the conclusion that meat can be eaten regularly, and more so under certain conditions, without having any uric acid whatever form in the body.

In order to find out just what amount of uric acid, if any at all would be found in specimens of urine taken from day to day for a time and examined carefully after a meal of meat had been eaten, I made the following experiment:

I put a man about forty years old, of full eating habit and a consumer of more or less proteid material all the time, on a diet for several days.

He was to take meat at his meals once or twice a day, as much as he wished, drink water in between his meals and keep his bowels well open.

A short time after his food had been taken he was to collect a sample of his urine for examination.

If uric acid occurred in the urine of any one, it would be most likely to be found in this subject, a married man, on his feet a great deal, inside mostly and not getting much exercise.

He followed out the instructions given him and collected a sample of his urine for about six days regularly. These six specimens of urine were considered sufficient to prove whether the eating of meat would cause any uric acid to form in the body or not.

The urine was examined in detail each time, but mostly to find the amount of chlorides, phosphates and sulphates present and to make the sediment carefully as to the formation of crystals.

Out of the six careful urinary tests made, not a single crystal of uric acid could be detected by microscopic examination, and it was hardly to be expected that any traces would be found under the circumstances.

The color of the urine was yell. red in every instance but one, while the sp. gr. in each report made was low and no higher than 1020, no lower than 1018. Under this method the chlorides never reached a high figure at any of the examinations made as might only be expected. The highest point reached was at 20—310 in one instance, just a little beyond the normal daily maximum amount.

In five instances the amount of chlorides was very low and especially so in one case.

Upon five occasions the amount of chlorides was found to

be below the normal daily maximum amount, and three times just equal to the minimum daily figure, while once they were much beneath the normal daily minimum amount at the figure 5—77.5 which one would hardly expect.

In order to find out further whether or not any uric acid would be noted in the urine from eating proteid food, such as meat especially, I made some routine experiments upon myself for a few days.

I took a good meal of meat regularly once a day and afterwards collected a sample of the urine for examination. This was kept up for about eight days, a specimen of urine being collected after each meal.

Other articles of food were taken as well at each meal, while water was drunk in between them.

Altogether eight specimens of urine were carefully examined and the results were tabulated as follows:

The color in every case was yellowish red. The sp. gr. was high during the course of diet, reaching upon two occasions the unusually high mark at 1042, while the average was about 1030, and only once did it get below this figure at 1025.

The amount of chlorides never reached a high figure at anytime during the examinations, ranging from the low figure 8—124 below the minimum daily amount upon two occasions to the fairly high mark at 25—387.5 found only once. About five times the amount of chlorides was found to be low and beneath the normal daily maximum amount. The amount of phosphates was about normal in three instances at the usual maximum figure, while only once did they exceed the normal maximum index and only once registered below it.

The amount of sulphates did not reach a very high mark at any of the examinations. In five instances they were below the normal minimum daily index at the figure one, while in only a single case did they reach the maximum daily amount. Where much proteid food is taken regularly, such as meat and eggs, if all of the tissues of the body are functioning normally and properly, an increase in the amount of chlorides may be looked for almost as the rule, and the same in case of the sulphates which has often been noted.

The amount of sulphates of course is more or less dependent upon the intake of proteid food as to whether it is at a low or a high figure.

In the present cases however, where proteid food has been taken daily, it has been found that both the amount of chlorides and sulphates are low, so that under these circum-

stances the presence of uric acid would hardly be looked for in the urine.

In these reports the amount of sulphates especially has to be noted, for in some instances they reached a very high point that is seldom noted, ranging all the way from the low figure 3—46.5 to the unusual index at 50—775.

In five instances the amount of sulphates was high and much beyond the normal daily maximum figure, while in three cases only, the point was just equal to the maximum daily register.

The next highest amount of sulphates was at the mark 30—465, which occurred twice, a point far beyond the normal index.

On three occasions the amount of sulphates was found to exceed a good deal the highest point reached by the chlorides at any of the examinations.

The register of the phosphates was high at all of the tests but one, exceeding by a good deal the normal daily maximum amount. With both the phosphates and sulphates at such a high mark in each case, it would almost seem as if uric acid would be present in the urine, still this was not the case, even if there was tissue sub-oxidation, causing it it will be seen, the sp. gr. to be unusually high a number of times.

1. Yell. red. Sp. gr. 1020; Cls.—10:155; P.—5:77.5; S.—1:15.5; Uric acid—0.

2. Yell. red. Sp. gr. 1020; Cls.—10:155; P.—5:77.5; S.— $\frac{1}{2}$:8.

3. Yell. red. Sp. gr. 1018; Cls.—10:155; P.—3:46.5; S.—1:15.5.

4. Yell. red. Sp. gr. 1018; Cls.—20:310; P.—10:155; S.—1:15.5.

5. Yell. red. Sp. gr. 1020; Cls.—5:77.5; P.—0:0; S.—3:46.5.

6. Light yell. Sp. gr. 1018; Cls.—15:232.5; P.—5:77.5; S.—1:15.5.

After eating meat:

1. Yell. red. Sp. gr. 1025; Cls. 10:155; P.—2:31; S.—30:465; Uric acid—0.

2. Yell. red. Sp. gr. 1042. Cls.—10:155; P.—20:310; S.—15:232; Uric acid—0.

3. Yell. red. Sp. gr. 1030; Cls.—20:310; P.—10:155; S.—3:46.5; Uric acid—0.

4. Yell. red. Sp. gr. 10:30; Cls. 20:310; P.—15:232; S.—3:46.5; Uric acid—0.

5. Yell. red. Sp. gr. 1032; Cls.—25:387.5; P.—20:310; S.—3:46.5; Uric acid—0.

6. Yell. red. Sp. gr. 1035; Cls.—10:155; P.—15:232.5; S.—20:310; Uric acid—0.
7. Yell. red. Sp. gr. 1034; Cls.—8:124; P.—15:232.5; S.—30:465.
8. Yell. red. Sp. gr. 1042; Cls.—8:124; P.—8:124; S.—50:775.

Spirochaetes. Hideo Noguchi of N. Y. in the Jour. of Lab. & Clin. Med., Meh., 1917, reviews at length, the biologic classification and relation to various diseases in man and animals of the surprisingly large list of species and discusses the viability, susceptibility to antiseptics and other factors, especially with regard to *treponema pallidum*. With special cultural precautions, including attention to temperature, provision of pabulum and recultivation, *T. pallidum* may survive a year or more but, without special precautions, even in its original site in post mortem material, it usually dies in 1-3 days. It is killed by temperatures of 50-55° C. within 20 minutes, or according to Akatsu, it may survive an hour at 60° and 10 minutes at 55° but is killed at 55° within 15 minutes and at 60° and upward, within 5 minutes. Tables show that it is killed by a large variety of antiseptics and even drugs not usually so considered, in dilutions much weaker than those commonly used. Among these are the bile salts and sodium oleinicum. (Other reports state that ordinary soap quickly kills and that low temperatures at least markedly reduce the virulence). The general conclusion seems to be justified that syphilis is a disease in which fomites in the ordinary sense, play a small part and that it is not liable to transmission by faults of sanitation; in other words, that discharges are not apt to produce the disease unless by very direct transference. These facts are in agreement with purely empiric observations as to methods of infection. While a considerable proportion of cases are "insontium," analysis shows that the term must be interpreted in a quite strict moral sense. The majority of cases of syphilis insontium are due to the recognized common etiologic factor which, of course, is equally dangerous with or without a marriage certificate, if the other party has the disease. The majority of the remaining cases of syphilis insontium are due to close personal contact, including indeed caresses of a strictly sexual nature, other than coitus. In a good many cases the term "insontium" is a misnomer and merely recognizes certain arbitrary distinctions of personal contact under sexual excitement. The plain fact of the matter is that strictly scientific research fully justifies empiric scepticism of the probability of contracting syphilis by ordinary accidents.

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Do we realize the full significance of the estimate of physicians demanded for the present war, by our country? It means, at least, an eighth of the total number of men and women holding medical degrees; about a sixth of the men actually in medical practice. Allowing for the wise decision not to deprive the rural districts of physicians, it means that nearly a third of the male practitioners of cities are required. If the same age limits were applied to the medical department as to the general draft, it would take practically every physician under 31. Indeed, when we consider that few persons have been able to graduate in medicine in the last ten years, under 22, that the average age at graduation is 26, and also that even in the first 6-9 years after graduation, there is a not inconsiderable ratio of deaths, it is doubtful whether there are 20,000 male physicians in the country, under 31. Compare the requirement with the liberal allowance that must be made for physical disability and with the requirement, for men outside the medical profession, of only about 1 out of 5, for military purposes.

In mere numbers, this quota of medical men is impressive. With a very few exceptions, it is greater than any entire army in what is now the U. S., up to the War of 1812. With probably no exception, it exceeds any single combatant force of the Colonial Wars or that of the Revolution. It is the equivalent of a division up to the present, greater than a division in some of the present belligerent armies even at full strength, it amounts to $\frac{2}{3}$ of the present theoretic

division of the U. S. Army. Expressed in lower terms, it is equal to 6 full war strength regiments of the present, to 20 regiments as the term has usually been employed in the past, to 30 or 40 of the regiments that we have seen in parades or processions. It is equal to the total force required to maintain 4 or 5 miles of front in trenches. The Surgeon General of the U. S. Army will have under him, at the present estimate, a force of officers and enlisted men greater than the entire U. S. Army on a peace establishment.

Have we considered why an estimate of 20,000 medical officers has been made, when all present talk has been of an army of at most 2 million? Such an army would need about 10,000 medical officers according to past standards; 12,000 pro rata to even last year's statistics, when the number of all officers was relatively high, to allow for expansion to what was formerly the official war strength; 14,000 according even to the highest estimates up to the present war. The mere figures should bring home to us that the medical department is not a fixed quantity, that it is not merely liable to diminish according to ordinary laws of mortality so that its replenishment can be left to the future. There has been considerable loss by death and permanent disability, of the surgeons of other armies and our country will undoubtedly be called upon immediately to make good this loss on their part. But we cannot be blind to what the allowance beyond the needs of the immediate future signifies to us.

Real and Imaginary Dangers of Moving Pictures.

So far as we have been able to observe, the sanitary dangers are, on the whole, less than for theaters, schools and churches. Any place where large numbers of human beings are brought together, inevitably magnifies the danger of contact infection of all kinds but the better class of cinematograph theaters are cleaner, better equipped to minimize the accumulation of infectious matter and attended by a cleaner and more healthy audience than most other places of meeting for any purpose.

Eye strain, a factor of importance for ragged pictures, and those shown from unsteady instruments, does not seem to be excessive under proper conditions, unless perhaps for those whose attendance is excessive and, even then, it is questionable whether it is greater than for any comparable form of amusement. The glaring lights at some of our highest grade musical entertainments and the subdued lights in many churches involve more eye strain than most of the better grade picture shows.

Waste of time, unwholesome psychic influence and extravagance are chargeable to picture shows to just about the same degree as to other forms of indoor recreation, even to reading. A properly chosen picture show includes valuable information as to current events, good literature, visualized, good comedy, travel and nearly all other items that may be found in periodicals of the better type, presented in an easy way to receive and to remember. Low grade picture shows are equally comparable to low grade reading matter. In other words, the charges against the cinematograph in these respects are charges against the individual but the former are more open to criticism and to control by public opinion and legislation. Given an individual with much leisure, not of a type of mind conducing to self improvement and not physically able or inclined toward out-door recreation, the picture show is probably the least objectionable form of amusement available. Even deliberate choice could scarcely confine it to objectionable features nor prevent a good deal of educational benefit. A person with any serious interest in life or even a variety of social interests can scarcely become a "movie fiend" and would, if there were no such shows, waste time in some other way. As to extravagance, even a fiend can scarcely spend more in a week than on a single evening of recreation of another kind.

Sexually objectionable shows, either in the sense of anatomic displays or of immorality of plot seem to be on the whole less frequent in films than on the stage. Perhaps, however, the mere fact that one is viewing a picture discounts the first element. The vilest plots, of either film or humanly acted dramas, are in problem plays exploited as educational and occasionally endorsed by uplift societies. We do not remember even to have seen a picture play that was as bad in the first regard as actual plays by living actors and, unless especially advertised as of moral value, very few picture plays are objectionable on the latter score.

We are somewhat sceptic as to the influence of picture shows in inciting to crime. As a rule, even when burglaries, combats, etc., are shown, wrong doing is punished or the criminal reforms. And it must not be forgotten that the "lower" the show and its audience, the greater is the tendency to emphasize trite moral conceptions and ethical ideals. It is hardly imaginable that a professional criminal could obtain pointers from a picture show. The amateur, would-be criminal may imagine that he is obtaining useful information for a career of crime but, if so, his detection is all the more certain. Young children may be unduly excited by almost any form of evening recreation, may start off to kill Indians

or lead a buccaneer's life just as they did long before the cinematograph was invented but the normal boy and girl, of an age to have any conception of the real instruments and methods of crime, is now sophisticated to the point of taking fiction at its proper value. So far as we have observed, accounts of incitement to juvenile crime by picture shows have been much exaggerated and apply only to the mentally deficient who ought to be under custodial control of some sort. However, these remarks are not to be construed as a defense of the kind of pictures discussed.

The real danger of the picture show, as of the stage and of fiction in general, is the conveyance of wrong information, all the more liable to be accepted at its face value because of the insidious, taken-for-granted way in which it is presented. For example, the third degree, a favorite topic, should be regarded from two extreme view points. If there is at present any basis of truth for such depictions, the matter ought to be investigated and the evil stopped. If the implication is false, such depictions should be penalized.

Physicians certainly cannot claim that our profession is neglected by the movies but one is inclined to speculate whether the conceptions that we gather as to other professions and industries are as far from the truth as the majority of implications as to our own work. Some of the medical teachings of the movies to which we particularly object are the following: That physicians commonly fall in love with their patients or nurses; that nurses "save the day" in spectacular ways in the conduct of patients, especially by interfering with the egregious blunders of physicians; that the hardships of a medical career are removed by one signal success—a mistake even more frequent in printed than in filmed fiction; that physicians, as political agents or private malefactors, use drugs, bacterial cultures or mere enforced neglect to kill human beings; that they are oppressive in their charges or, on the other hand, that indiscriminate free service is desirable; that it is a noble act, justified by superior skill and humanity to steal a patient; that under any ordinary economic conditions, physicians can maintain the mansions in which they are placed by film play wrights or that they can attend to practice at all in the irregular and brief intervals between yachting trips, prolonged vacations for other purposes, or engrossing political, scientific and social occupations. It is, to say the least, aggravating to those of us who gain a very moderate degree of diagnostic skill and therapeutic power by many years of hard labor, to read or view a film, the achievements of medical supermen. We envy the fiction doctor who pulls his patient through a crisis by

some sort of mental exultation. We recall experience in many diseases and wonder how far even the conservative medical conception of a crisis is justifiable. We compare our own mistakes and confessed ignorance as to prognosis with the accurate predictions as to the duration of a sleep, of the fiction doctor. We wonder why we have not seen cases of "brain fever" like those of fiction. We note resuscitations from drowning and gas poisoning under conditions in which we would begin a necropsy. We are amazed at glib representations of dual personality, metempsychosis, restoration to health—and usually marriage ability—of cases of epilepsy, melancholia and other grave neurotic affections and wonder if such representations may not have some effect on evil heredity. On the other hand, we are grateful at the relative frequency with which we enjoy a night's sleep without professional interruption, and the infrequency with which we make calls in blizzards or through swollen streams with the bridges down. We poor real physicians grow rusty very rapidly without continued experience. Not so the fiction doctor. The governor of a state, who early left medicine for a political career, is quite competent to attend to any emergency that may arise in a medical way. The doctor who has become a country gentlemen dispenses medical charity not only with absolute faith in his competence but without a qualm at encroaching on the practice of his neighbors. In real life, physicians rarely treat their own families, recognizing the disturbing influence of personal affection on even a high grade of skill in the condition involved. The real physician frequently violates this common sense rule. When a physician not in active practice is depicted in the foreground of a miscellaneous lot of electric and chemic junk, raising the dead to life, no protest is necessary as the matter is obviously in the realm of the supernatural and impossible. But, the same principle carried out to a minor degree, within the realm of the possible, does great harm, by arousing false hopes and establishing unattainable standards by which our profession will be judged.

It is particularly exasperating, at the close of a film that insidiously teaches falsehoods that may have a serious influence on popular conceptions to have flashed on the screen: "Passed by the Board of Censors." One wonders where the Board of Censors does draw the line.

A Simple, Practical, Surgical Research.

So far as we have been able to learn, there are no accurate statistics on a large scale, showing the actual and relative

weights of limbs. In metabolic problems, the question often arises how to allow properly for the obviously different requirements of muscular and skeletal parts, as compared with the viscera. In the case of persons who have suffered amputations, somewhat the same problem arises in a simpler form, to determine relatively normal weight, departures from nutritive requirements, etc. The war furnishes an opportunity to acquire statistics in a short time and we recommend this matter to the consideration of military surgeons. If we had merely the total weight and height of men and the weights of limbs amputated at specified distances, the statistics could readily be assembled.

BOOK REVIEWS

Books mentioned may be inspected at and ordered through this office. So far as possible, books received in any month will be reviewed in the issue of the second month following. Pamphlets, quarterly and similar periodicals, reports, transactions, etc., will, as a rule, merely be mentioned.

The Prescription. Otto A. Wall, Ph. G. M., M. D., St. Louis; C. V. Mosby Co., St. Louis. 4th revised edition, 274 pages, \$2.50.

Under general considerations, the author discusses the Galenicals and various special points, as the distinction among officinal, official and pharmacopoeial. Weights and Measures include Oldberg's proposed method of making the drachm correspond to exactly 4 grams and the grain to 1/16 of a gram and also take up the matter of prescribing by percentages and proportions and of approximate measures. Under the head of Language, various full lists of Latin terms, abbreviations, etc., are given. The extemporaneous prescription is dealt with at length. The most interesting, if not the most practical part of the work is devoted to history and superstitions and shows a surprising amount of scholarly research.

Diseases of the Skin. Richard L. Sutton, M. D., Kansas City; C. V. Mosby Co., St. Louis. 2d revised edition, 1021 pages, 833 illustrations, 8 colored plates, \$6.50.

The author adheres as rigidly as possible to the pathologic classification: hyperaemia, inflammation, haemorrhage, hypertrophy, atrophy, pigmentation anomalies, neuroses, new growths. Unlike some authors, and especially notable from

his experience as a naval surgeon, he does not give an undue consideration to syphilis but discusses its manifestations under the various pathologic headings. Some of the most interesting details are included under the appendages: hair and follicles, sebaceous glands, coil glands and nails; and the mucous membranes adjoining the skin. The naval experience alluded to, undoubtedly allows the author to speak from direct familiarity with a number of race tropic affections.

The Child in Health and Illness. Dr. Carl G. Leo-Wolf, Buffalo, with an introduction on Prenatal Care by Dr. Peter W. Van Peyma, Buffalo. George H. Doran Co., N. Y. 297 pages, 68 illustrations, mainly from photographs by Dr. E. A. Sharp of Buffalo, charts of weight, etc., \$2.

While this book is expressly designated as a text book for mothers and wives, it deserves the consideration of the medical profession, largely because its particular object includes the discussion of a number of details, such, for instance, as the baby buggy, which do not usually find themselves in technical treatises and because the more technical details are adapted to ultimate clinical use. The scheme for the appearance of the teeth (page 32) is ingenious and more easily memorized than any other that we have seen. Feeding is based on a discussion of general principles, shows a practical familiarity with the many difficulties encountered, and is elucidated by a special chapter devoted to recipes. The care of the infant, both as to feeding, clothing, education and other points, is carried well beyond the earliest stages. Defects of the Eye and Blindness are discussed in a special chapter by F. Parke Lewis, M. D., of Buffalo. We feel especially proud that so timely and practical a treatise should represent the professional scholarship of our own city.

TOPICS OF PUBLIC INTEREST

Status of Internes and Medical Students With Regard to Draft. Hospital internes and medical students down to the second year may enlist in the Enlisted Reserve Corps, thus anticipating the draft. If already drafted and accepted, they may apply for service in the same. They will thus virtually be exempted from draft for the National Army, although this depends upon the action of the Surgeon General and the Adjutant General. The general policy will be to put such men on waiting orders, internes to report every three months,

students at the end of each semester, and to call them into active service at the expiration of a year's interne service or at the close of a college year in case the student is not promoted. This mode of exemption will not apply to internes after a year of interne service. It is required that the medical college be "well recognized," that the internship shall not be in a sanatorium or private hospital operated for profit, nor in one of less than 50 beds, nor will internships be recognized if established after May 18, 1917 (the date on which the draft law became effective) unless by reason of a proportionate, bona fide increase in bed capacity of a hospital, nor if entered upon later than Aug. 1, after graduation in medicine. It will be noted that these regulations (established by order of the President) provide throughout for good faith on the part of those directly interested and those in charge of medical schools and hospitals and that they are elastic enough to allow for future emergencies; that they do not allow prolongation of either undergraduates or hospital studies beyond the usual term, for the sake of avoiding service but, on the other hand, are an incentive to good scholarship; that they prevent the nominal or actual election of a medical career as a means of avoiding military service, by applying only to students already matriculated and who have completed the first year of study; that, subject to emergent needs, they allow the completion of the whole course of medical study without interference by the draft. A complicated problem seems to have been ideally solved.

Hospital Provisions. At cantonments in this country, hospitals will be provided to accommodate about 3% of the troops. Each hospital will have 1000 or more beds, will occupy 60 acres including auxiliary buildings and grounds and will cost about \$500,000 for the National Army cantonments. The National Guard camps, being temporary, will have hospitals of lighter construction, without heating and plumbing connections and will cost about \$400,000 each. 32 hospitals are projected at present. Abroad, it is estimated that hospital accommodations for 20% of troops should be provided.

Promotions in Medical Dept. of the Army. There is, at present, no authority for the appointment of a general, except the one Surgeon General so that promotions of colonels have not been possible. Several majors have become Lt. colonels and nearly the entire list of captains for 1916 have become majors. A few who were first lieutenants in 1916 are already majors, and many are captains. Since writing above, four colonels have been commissioned brigadier-general.

Volunteer Enlistment in Regular Army. In the six months, April-Sept., 218,547 enlistments have been received, bringing the army up to about 300,000 after deducting discharges and deaths.

Death of Insane Patient Under Peculiar Circumstances. About the first of August, Mrs. Kate Onuszczak of Lackawanna went, or was sent to Akron, O., to receive treatment for mental disorder from a midwife. The treatment consisted in packing the patient in a "bath" of feathers. She took her baby with her. Some time in September, the local authorities arrested her as insane and her husband went to Akron, secured the baby and returned home. On Sept. 24, the Akron authorities, apparently fearing that the patient would become a public charge, ordered the sheriff to send her home. He, accordingly, packed and secured her in an undertaker's basket. She arrived in Buffalo, extremely depressed physically, filthy, and violent. After a few days' more she died, without having shown indications of violence requiring extreme measures of restraint. Necropsy revealed no adequate cause of death which was ascribed to the exhaustion due to the method of restraint while traveling. It does not seem to us that the use of the carrying basket, under proper limitations, to convey a violently insane patient, can be condemned. Used for a patient not violent and presumably sufficiently in the possession of her mentality to realize its significance, the mere fact of being placed in a receptacle for dead bodies would be enough to disturb the mind to a very serious degree. Many persons, scarcely even deserving to be stigmatized as hysteric or neurotic and not in any sense insane, would be rendered insane by this procedure alone. With the addition of retention devices and the lack of attention to the ordinary necessity of keeping the patient's bedding in a state of cleanliness, the effect on the psychic state of the patient might well be serious, even fatal as in the present case. Three other questions present themselves: Why should a midwife, in any civilized country, be allowed to treat psychoses, or any other serious condition? We pass over the merits of the feather pack as the exact method of therapeutics by extra-professional practitioners usually involves bizarre procedures. Why was the patient's husband allowed to leave Akron without giving proper guarantee of the patient's care and support? Why should the "shipping" method be applied to any human being sick or well, for the sake of avoiding improper public burdens of any kind? In this regard, the case is in analogy with the driving out of tramps, the banishment of prostitutes, the sentence of an un-

desirable to leave town within 24 hours, or any similar makeshift to avoid local responsibility without reference to the disposal of the case in the interests of the individual or of the public. Some reasonable, efficient co-operative plan ought to be readily devised to cover all cases, allotting the responsibility according to established general principles.

The University of Buffalo opened its sessions for all departments, Sept. 24. This is the 73d session of the Medical Dept. which, for many years, constituted the entire university. Registration in Med. Dept.: Freshmen 83 (20-25% liable to draft), Sophomores 62, Juniors 40, Seniors 28 (several members of upper classes having voluntarily entered the military service).

Saving of Waste in Garbage. There is a classic story of a garbage collector who estimated the social standing of his clientele by the elegance of their swill. The State Bureau of Municipal Information has found that the garbage of N. Y. City (Manhattan, Bronx and Brooklyn) was 5,953 cubic yards less in June 1917 than in June 1916; of Buffalo 1,069 tons less; of Rochester 693 tons less; of Syracuse 38 tons less, other cities in somewhat the same proportion. The diminution for July was less than for June. This is ascribed to a relaxation in prudence but it occurs to us that it may really represent an economy by heeding the published warnings to preserve food and to use fresh vegetables as much as possible, both of which procedures would inevitably cause an increase in garbage as such food stuffs contain a large amount of waste matter. The garbage, and waste paper and tins of training camps has been collected and sold so as materially to increase the funds available for extra rations.

Prolificity. Mrs. Jean Baptiste died in Ottawa, Sept. 28, aged 98. She had 2 sons and 10 daughters; 79 grandchildren; 212 great grandchildren; and, at the time of her death, 28 great great grandchildren.

Death From Exhaust Fumes. George N. Swan of Buffalo was found dead in his garage, Sept. 30, his absence for two hours having caused alarm. The engine of his car was running and the garage was filled with fumes. We have already called attention to several deaths and several narrow escapes. The exhaust fumes include carbon onoxid and probably a mixture of hydrocarbons and partially oxidized products which are more or less anaesthetic, thus producing unconsciousness.

Conservation of Drugs. The Committee of Public Safety of Pennsylvania, has issued a letter, especially to druggists but also applying to physicians. Special attention is called to possible loss by deterioration, of biologic products in general, vaccines, Bulgarian bacillus cultures, and of preparations of ergot, digitalis and strophanthus. It is urged, therefore, that care should be taken not to overstock with such materials.

Books for Soldiers. The Buffalo Public Library or any of its branches will receive books for soldiers. Discards and poorly printed books are not wanted but a book is not necessarily worthless because it is not brand new. Standard fiction is especially desired but works on history, technical books on aviation, wireless, submarines, automobiles, telegraphy, hygiene, etc., and especially French grammars, dictionaries and lesson books and good scientific books generally are needed. Current magazines, the kind that you would read yourself, are also wanted.

Admission of Women to Medical Courses is announced by New York University and Harvard. So far as we understand the qualifications, however, the former will admit women only to a two-years' medical preparatory course and the latter will limit its admissions to Radcliffe graduates, offering also a two-years' preparatory course.

The Diazo Test has been abandoned by the N. Y. City Health Dept. Last year's experience gave 250 positive reactions out of 1700. It does not occur in mild cases of typhoid and does occur more or less frequently in cancer, pneumonia, tuberculosis, various acute fevers and after taking naphthalin, chrysarobin and tannin.

Glycerin, government chemists announce, can be made from sugar at a cost of about 25 cents a pound as against 90 cents from fats.

American Medical Journals. The 1917 edition of Polk's Directory lists 190 journals for the U. S. and 12 for Canada (not counting State Health Bulletins and a few similar publications). 45 of those in the U. S. have been discontinued and 20 new ones added since 1914. There have also been numerous changes in editorship, title, and addresses of publication, even from one city to another or to quite distant cities. Many of the discontinuances have been due to merger. The medical journals of the U. S. may be divided as follows:

Organization (A. M. A., State and a few county and interstate) 32. Specialties (several conducted by associations) 62. Sectarian (organization and private) 20. General nature and general circulation 16. General nature but local circulation 50.

Statistics of Army Medical Corps, Oct. 1. Enlisted personnel over 69,000, as against 6,600 before the war. Medical Reserve Corps, nearly 13,000 commissions accepted. Dental Reserve Corps over 2600 commissions accepted. Sanitary Corps 240. Regular Nurse Corps over 300, as against 230 Mch. 1. Reserve Nurse Corps 1600, as against 227 Mch 1. In the same time, the Surgeon-General's office has increased from 10 officers and 140 clerks and messengers to over 100 officers and over 500 clerks and messengers. The really wonderful thing is not the rapid expansion but the fact that the whole system has not broken down under its own sudden increase. On the contrary, the Medical Department of the Army led by several years in the establishment of a reserve corps, prepared for a possible emergency which general opinion regarded as altogether impossible, up to the maximum degree allowed, and further, elaborated a system which has worked under the enormous strain of necessary sudden increase in numbers all along the line, so nearly to perfection that it has anticipated the actual demands placed upon it and holds in reserve forces for practically every need, several months ahead of present demands. Will the medical profession show its appreciation of its own professional conferrers by a further, immediate volunteering of services, so that the Medical Department can not only hold its lead but do so without wasting any of its work or mental force through anxiety about the future? This is not merely an appeal to patriotism but to professional esprit de corps. Without in the least condemning the general plan of the selective draft, let the medical profession show that it is unnecessary.

Medical Reserve for N. Y. State and Erie Co. According to Captain Van Buren, representing the state branch of the Council on Public Safety, there are about 15,600 practicing physicians in the state, of whom 15% are needed for the reserve, 2350 and of whom about 1900, 12% have been recommended for commission. For Erie Co., the corresponding figures are: 868, 130 and 62—7%. Are we slackers at this end of the State? The Council has laid down the following principles for exemption—moral at present, actual in case of draft: single physician in a village, serving an isolated com-

munity; hospital staffs not to be depleted below 50% of medical and surgical attendants; important executive positions, as health commissioner, superintendent of hospital, etc.; 3 or more dependents, 75% or more dependent on physician's earnings; and, of course, advanced age and physical infirmities, female sex of physician. It is estimated from careful study of the state military census that Erie Co. has 503 potentially available men for the Medical Reserve so that the quota of 15% of the total, means more than 25% of this number. It is stated that fully 90% of the Reserve officers have been ordered to duty.

The Training School of the Buffalo Homoeopathic Hospital held its commencement exercises Oct. 5. The following were graduated: Frances H. Hagar, Helen M. Daley, Marjorie Mulcuhy, Florence O. Benson, Hazel A. Rykert, Glenna A. McPhee, Teresa M. Kirsch, Irene H. Neelson, Alice Jane Caley, Margaret S. Bell, Martha Ann Calladine, Helen D. Thomas, Irene G. Clark, Josephine D. Wilcox, Olive R. Cole, Kathryn Curran, Ruth S. Costello, Winifred Stickles.

The Food Supply. It is a very simple sum in arithmetic to show that, at 2000 calories a day, the per capita food for a year must equal 730,000 calories; at 2500, 912,500; and at 3000, 1,095,000. At a liberal average, we may take the convenient number of one million as representing the caloric ration for a year.

Recent official estimates of the crops for the present fall, in the U. S., reduced to pounds per capita on the basis of 100,000,000 population, are as follows: wheat 395, corn 1792, oats 505, barley 96, rice 20, buckwheat 8; total cereals 2316, net pounds after reducing to flour or meal, etc., with minimum waste, 2,000. Potatoes (allowing 20% for peeling) 216 pounds; sweet potatoes 36 pounds. Beans (5 principal states only) 9.48 pounds.

These represent in calories per capita: cereals 3,175,000; potatoes 71,190; sweet potatoes 18,780; beans 13,900; total 3,288,870.

Here is a food supply for more than three years for our own people; or for the U. S. and all its European allies except Russia (totaling about 247,000,000 people) for nearly 1½ years. This ignores fresh fruits and vegetables, sugar, meats, butter, milk, cheese, eggs, lard, etc.

Foods of this last group, in storage in the large depots of the U. S., Oct. 1, amounted to 613 million pounds of meats, 8 of lard, 105 of butter, 84 of American cheese, 2½ billion eggs. These figures do not include minor depots nor the cur-

rent market and retail supplies.

Mr. Hoover has announced that definite measures are to be undertaken to control the price of wheat, flour and bread, as well as other staple foods. The surprising statement is made that the cost of converting wheat into flour and marketing the flour is only 40-60 cents a barrel (196 pounds) or about $1/5$ up to $1/3$ cent a pound. This low cost is due to the value of by-products and probably is not possible on the theoretic maximum conversion of 90% of wheat into flour or even on the basis of using 4 bushels of wheat (240 pounds) to produce a barrel of flour, which corresponds to a waste of nearly 20%. It is also announced that some kind of "war bread" will be marketed at retail for 5 cents a loaf (Full pound?). We heartily endorse everything that Mr. Hoover has said in regard to regulating food prices, except his apology which is somewhat in line with that of the man who explained, when seen at church, that his car had broken down. A government should become paternal at just the moment when it ceases to be fraternal, i.e. when practical experience shows that certain big brothers are the only ones who can carry on large industries and that they exploit their little brothers.

Workman's Compensation Law. The State Industrial Commission will, hereafter, pass upon all claims for medical services to injured employes and direct the method and amounts to be paid. If the workman applies to his employer or accepts the attendance provided by the latter, any claim will be against the latter. If the workman employs a physician directly, the claim will be against the workman himself but subject to the supervision of the Commission. On the one hand, this will possibly reduce the fees which physicians and surgeons consider just; on the other hand, suits for claims will be rendered unnecessary.

Stenographers and Type Writers Needed. The U. S. Civil Service Commission, John A. McIlhenny, Pres., Washington, D. C., states that there is urgent need of a large force and our readers are asked to send names.

Nikalgen, a proprietary preparation probably composed largely of quinine and urea hydrochlorate, has been found efficient in France as a local analgesic, when applied on raw surfaces especially burns. Almost complete relief is obtained in 5-10 minutes and persists 3-24 hours, more than 5-7 applications (by spray or saturated dressing) being rarely necessary. It is noteworthy that in this case, as that of

ambrine ethical considerations have not prevented the use of practical measures. It may be still necessary to emphasize that the relief of pain by diminishing shock, facilitates healing.

Exemptions Before Physical Examination of Drafted Men is the order of the Provost Marshal. This is a matter of common sense under the emergent conditions present, yet it would be a great benefit if the 10,000,000 young men drawn could be given a physical examination.

Belgian Birth and Death Rates. In the Brussels District, the rates for 1913 were 17:1000 births and 13.7:1000 deaths. For the first half of 1915, the respective rates were 14.3 and 14. For the first half of 1917, 8.5 births to 19.3 deaths. These statistics corroborate the contention which we made at the beginning of the war that the distribution of the population by age and sex would not be changed by military casualties to the extent prophesied, because the deaths of the non-combatant population would be very high as a result of privation. The condition in Belgium is, in many respects extreme, approaching that of stone and bronze age warfares. It would not be at all surprising if, after the war, it were found that the greatest losses of population were noted, not in men of military age, but among the aged and infants.

The Wheat and Rye Crop of Germany is stated to be 7½ million tons against 13 last year. Assuming the population to be 65 million, this comes to about 404,000 calories per capita, or 40% of that needed from all sources. This is not bad in itself, especially when it is implied that the crop of potatoes is good. However, when we reflect that the U. S. crop of wheat alone is 395 pounds, of rye at least 20, and that of both wheat and rye in Germany only 254 pounds per capita, the difference is striking. It is still more so when we consider that, at a pinch, we could live entirely on our corn crop, so far as cereal food is concerned, and still have enough for feed for stock. In these comparisons, we have presumed that ton in Germany means a metric ton of about 2200 pounds.

Preservation of Practices of Medical Volunteers. Our scepticism as to the practicability of the methods of fraternal care of practices receives support from the fact that a single issue of the Journal of the A. M. A. contains 8 advertisements for locum tēnentes for the period of the war, on a basis of sale, small percentage or rental of equipment.

The Buffalo General Hospital formally opened its new private room addition, Oct. 23.

The N. Y. Skin and Cancer Hospital announces a course of clinics on diseases of the skin, by Dr. L. Duncan Bulkley, Wednesday afternoons at 4:15, beginning Nov. 7, in the Out-Patient Hall, 2d Ave. and 19th St. Physicians admitted on presentation of professional card.

SOCIETY MEETINGS

The Federated Alumni of the University of Buffalo, at a meeting last month, elected the following officers: Pres., Loran L. Lewis, Pres. of the alumni of the Law Dept.; Vice-Pres., Dr. Wm. G. Bissell, Pres. of the alumni of the Medical Dept.; Sec., Dr. G. Bertram Lemon of the Pharmacal alumni; Treas., Dr. J. G. Roberts of the Dental alumni. Local Alumni Associations will meet as follows: Chautauqua Assn., at Salamanca Nov. 15; Central and Northern N. Y. Assn., at Syracuse, Jan. 15; Metropolitan Assn. in N. Y. City, Jan. 16; Interstate Assn., at Elmira, Mch. 25; Rochester District Assn., at Rochester, Apr. 18. The annual meeting of the Federated Alumni will take place in Buffalo, on University night, Feb. 22.

The Wyoming Co. Medical Society at its meeting of Oct. 14 elected officers as follows: Pres., J. E. Slaughter, Warsaw; Vice-Pres., L. E. Stage, Bliss; Sec.-Treas., L. M. Andrews, Warsaw; Censors, M. J. Wilson, Warsaw; P. S. Goodwin, Perry; W. J. French, Cowlesville; Delegate to State Society, L. H. Humphrey, Silver Springs; Alternate, J. B. Brownless, Perry.

The Genesee Co. Medical Society held its annual meeting at Batavia, Oct. 4. Officers were elected as follows: Pres., R. M. Andrews, Bergen; Vice-Pres., E. F. Will, Batavia; Sec.-Treas., Edith F. Ryan, Batavia.

Elmira Academy of Medicine. At a regular meeting, Oct. 3, the following program was presented: Glands of Internal Secretion in Relation to Eye, Ear and Throat, B. G. Voorhees, Uterine Fibromata, R. G. Loop, title not stated, H. E. Batten of Corning. Pres. R. B. Howland, Sec. O. J. Bowman.

The Medical Society of the Co. of Monroe held a special meeting Oct. 9, in connection with the Auxiliary Medical Defense Committee of the County, at which Major Henry D.

Jump, M. R. C., showed moving pictures and spoke of the need of surgeons for the war.

Rochester Academy of Medicine, Section II met Oct. 10, various members presenting unusual cases and specimens. Wm. I. Dean, Chairman, L. W. Jones, Sec.

The American Laryngologic Assn. has sent us abstracts of its 39th annual congress. We have not the space to publish them but any one interested may consult them at this office.

The Buffalo Academy of Medicine opened the season with the meeting of the Section of Surgery at Orpheus Hall, 432 Franklin St., Oct. 3. (Meetings will be held regularly at this hall Wednesday evenings at 8:30 and visiting physicians are cordially invited. They should present themselves to some member and secure the privilege of the floor for discussion). Dr. Hugh A. Auchincloss of N. Y. gave a paper on Significance of Clinical Signs of Malignancy in Diagnosis of Conditions of the Mammary Gland. Jas. B. Cross, Chairman, J. F. Brennan, Sec.

The Section of Medicine met Oct. 10. Dr. Elliott P. Joslin of Boston spoke on New Ideas of Diabetes. Chairman, DeWitt H. Sherman, Sec. Jacob S. Otto.

The Section of Obstetrics and Gynaecology met Oct. 17. Dr. H. E. Hayd read a paper on The Thyroid in Gynaecology, Dr. N. Kavinoky on Conservative Treatment of Pelvic Infection. H. K. DeGroat, Chairman, Edward Meister, Sec.

The Medical Society of the County of Erie held its regular meeting in the Buffalo Medical College on October 8th, 1917. In the absence of President Potter, Vice-President Dr. George F. Cott presided. The minutes of the previous meeting and of the meetings of the Council were read and approved.

The following were elected to membership: Drs. Myron A. Thompson, Robert P. Dobbie, Earl L. Eaton, William H. Jones, Lyman J. Strong, Gertrude Davies, Harold J. Reist, Howard D. Hoehman, Hiram S. Yellen, Vincent C. Muscato, Rosco De Dominicis. Dr. Bernhard H. Brady was reinstated.

The following ticket was nominated for the annual meeting in December: For Pres., Dr. George F. Cott; 1st Vice-Pres., Dr. James E. King; 2d Vice-Pres., Dr. Earl Lothrop; Sec., Dr. Franklin C. Gram; Treas., Dr. Albert T. Lytle. Board of Censors, Drs. John D. Bonnar, Francis E. Fronczak, A. G. Bennett, A. D. Carpenter, F. A. Valente. Chairmen, Committee on Legislation, Dr. Harvey R. Gaylord; Committee on Public Health, Dr. Nelson G. Russell; Committee on Member-

ship, Dr. William F. Jacobs; Committee on Economics, Dr. John V. Woodruff.

Major Henry D. Jump of the Surgeon-General's office addressed the Society, and showed several reels of war pictures. The Major's address met with a hearty vote of thanks by the Society.

FRANKLIN C. GRAM, M. D., Secretary.

The regular meeting of the **Gross Medical Club** was held at the Roycroft Inn, East Aurora, Friday, October 19th, being entertained by Dr. W. H. Phelps. Dr. Jas. E. King, presided.

On motion of Dr. J. Henry Dowd the following men, members of the club, but now in the U. S. Service were continued on the active list, their dues and entertainments to be eliminated until after their return: Majors Wende, Clinton and Russell; Capts. Cott and McKenny.

Dr. A. G. Bennett read a very interesting paper, on "The Differential Diagnosis of Some Forms of Headache."

In the discussion Dr. Geo. F. Cott spoke from the standpoint of the rhinologist, the nose being often the cause of many forms of headaches. He cited the case of one man who visited the hospital in Philadelphia with a severe headache that had existed for years. Several neurologists had made a diagnosis of hysteria, but no result from any form of treatment. His was given the rotary test and trouble was shown to be in the sinuses, but no operation was made. In a day or two this man was picked up unconscious on the street and died in the hospital, a post mortem showed the rupture of an abscess which had been located in the sinuses, had been an extension from the nose, and could have been relieved had operation been performed before.

Dr. Dowd brought out a very important point, nerve-cell starvation as a cause of neurasthenia, the latter being the cause of many headaches.

The following case was reported in which the specialist treating the eyes acknowledged, had the general neurasthenic condition been remedied by the general practitioner the patient would have been saved the trouble and expense of consulting the ophthalmologist.

Miss L. For months repeated attacks of styes, always more or less headache, there were also many symptoms of nerve-cell tire, neurasthenia present. Refraction with the fitting of proper glasses seemed not to relieve, in fact they so aggravated the condition that she could not use them at all with any ease. Nose pieces were changed but no relief, rather the whole general condition was made apparently worse. Being

referred for examination as to renal condition, I found no albumin or casts, no sugar, pus or blood, a considerable increase in indican and a Phosphatic Index 80% minus.

Being inclined to hysteria Fl. Ex. Valerian M 20, Comp. Phos. Tonic M 25 was ordered in glycerine three times daily in milk half an hour after food.

The headaches ceased in about three or four days, her general condition improved, at the end of two weeks albumin had disappeared and Index was noted to be gradually raising. At the end of nine months this lady was seen again, she had gained 15 pounds in weight, had not had an attack of stys, there was no headache and she said she found it was not necessary to wear the glasses.

Dinner was served at the Inn, several invited guests being present, including Major Rucker, U. S. A., in charge of the Base Hospital at Fort Porter.

The Buffalo Chapter of **Nu Sigma Nu** held a smoker at the chapter house, Oct. 18.

The Steuben Co. Medical Society held its annual meeting at Bath, Oct. 17 and elected the following officers: Pres. Frank H. Swain, Corning; Vice Pres. R. C. Spaulding, Cohocton; Sec.-Treas. B. R. Wakeman, Hornell; Censors, Drs. Smith of Corning, Spaulding of Cohocton, Stewart of Canisteo, Aldrich of Addison.

PERSONAL

Announcement of removal, travel, and other matters of interest are requested. Please report errors in the listing of any physician in the State and other directories, that we may co-operate with the State Society in securing a correct list.

Dr. R. C. Miller of Buffalo has opened an office at 314 Federal Building.

Dr. Dewitt C. Greene of Buffalo returned about Oct. 1 from a motor trip to the Adirondacks, Berkshires and Cape Cod.

Dr. Chas. W. Bethune has moved his office to 520 Franklin St. Practice limited to Urology.

Dr. John D. Flagg of Buffalo has moved his office to 473 Virginia St., practice limited to Laryngology.

Dr. M. J. Wilson of Warsaw is spending several weeks in Oklahoma.

Dr. Ward B. Manchester, Buffalo 1907, has left for military service and his brother, Dr. L. B. Manchester, Buffalo 1913, has moved from Akron to Batavia, to take his place.

Dr. Henry C. Lapp of N. Tonawanda has been appointed Medical Inspector of Public Schools succeeding Dr. E. T. Leonard.

Dr. Guy L. McCutcheon of Buffalo left for Phoenix, Ariz., Oct. 20, to spend several months.

Dr. Edgar A. Forsyth of Buffalo announces the removal of his office to 471 Virginia St.

Dr. Hiram P. Whitford of Bridgewater, N. Y., writes us a friendly letter. He was born Oct. 15, 1826—just 91 years before the date of this writing—at Cantonbury, Ct. He was graduated at the Eclectic College of Cincinnati in 1860. He has been Health Officer of Bridgewater for over 50 years and is still active, "able to go wherever I please without cane or other help," although he has handed his practice over to his son, and writes a better hand than we can, though that is not as high a compliment as it might seem. He remembers the writings of Dr. Flint, our first editor, as current events.

Dr. Moses Rosenberg of Rochester, surgeon on the British steamer Verdi, sunk by a German submarine, was among those rescued.

Dr. Charles G. Wagner, Supt. of the Binghamton State Hospital, is reported seriously ill.

MILITARY PERSONALS

Lt. F. C. Robbins of Hornell has been ordered to Columbia, S. C.

Capt. G. B. Campbell of Utica has been ordered to Little Rock, Ark., for duty.

Military Service. (Note: Both the Journal and the County Societies have experienced the utmost difficulty in obtaining full notes of this nature. We can not even ask the Surgeon General or the Adjutant General to sort over an index of many thousand names. There are various more or less practical benefits that physicians in military service will obtain from having the fact of their absence or of awaiting orders,

known to the profession. Among these benefits are commutation of society dues, reading matter which most journals would probably contribute or secure, protection of practices, etc. Anyhow, just as a matter of friendly interest, we want to make these notes as full as possible. Please notify us of omissions).

Dr. G. K. Smith of Syracuse has been appointed Lt. and ordered to Camp Mills, Garden City, L. I.

Dr. W. E. Muns, City Bacteriologist, of Syracuse, has been commissioned Lt. and ordered to Washington.

Dr. Edward J. Wynkoop of Syracuse has been commissioned Capt.

Dr. R. L. Crockett, Mayor of Oneida, has been ordered to Ft. Meade.

The following medical officers of what was the 74th Reg., N. G. N. Y., have been assigned to special duty as follows: Capt. Arthur C. Schaefer, attached to Div. Surgeon's staff for sanitary duty; Lt. Harry Girvin, to a field hospital; Lt. Harry Nealon to the 1st Field Hospital Co.

Lts. A. A. Gartner and W. L. Machemer of Buffalo have been assigned to duty with Base Hospital No. 23.

Lt. C. A. Lawler of Salamanca has been ordered to Hoboken for duty.

Drs. A. C. Abbott and Scott R. Fisher of Syracuse, members of the staff of the Crouse-Irving Hospital, have been appointed Lts. and ordered to the Army Medical School at Washington.

Dr. George S. Skiff, Buffalo 1887, of Gainesville has been appointed to the Medical Corps of the Army. His position as Health Officer of Gainesville has been assumed by Dr. L. H. Humphrey of Silver Springs.

Dr. George F. Cott of Buffalo, President-nominee of the Erie Co. Medical Society, has been commissioned Captain and is examining applicants for the Aviation Corps.

Dr. Wilfred H. Baines, Lt. M. R. C., was ordered from Ft. Benj. Harrison to duty in a French Hospital, Sept. 20.

Dr. T. B. Bond of Cuba, left for Ft. Oglethorpe, Ga., Oct. 5. (The name of the camp reminds us to remind our readers that if they are not already well informed on the colonial wars of America, this part of history is extremely interesting, particularly as showing how much better prepared this country was for the Revolution than for succeeding wars—relatively to military standards of different centuries).

Lt. Edward Hanes of Rochester has been ordered to Washington Barracks to make examinations in his specialty.

Lt. F. C. Devendorf of Utica has been ordered to Camp McClelland, Anniston, Ala., to make examinations in his specialty.

Capt. Robert King, of the Buffalo State Hospital staff, has been ordered to Camp Wheeler, Macon, Ga., to make examinations in his specialty.

The following have been ordered to Ft. Benj. Harrison, Ind., for instruction: Major Frank A. Walder, Lockport; Capt. Otto C. J. von Renner, Buffalo; Capt. Walter H. Vosburg, Dunkirk; Lt. Joseph J. Duuigan, Auburn; Paul E. Betowski, Bath; Arthur E. McCarthy, Buffalo; Windsor R. Smith, Buffalo; Victor A. Tyrasinski, Buffalo; Henry S. Edmunds, Cassadaga; Hall G. Van Vlack, Forestville; Wm. M. Sill, Jamestown; Bernard S. Strait, Penn Yan; Roy L. Marshall and Le Clare Stuart, Rome; Jas. A. Taggert and Geo. B. Ubel, Salamanca.

Lt. Arthur G. Pilch of Rochester has been ordered to Ft. Oglethorpe for instruction.

Major Chas. W. Hennington of Rochester, our Associate Editor, has been ordered to the Post Graduate Hospital, N. Y., and thence to Boston, for instruction in orthopaedics.

Major Edward S. Van Duyn of Syracuse, having completed his special service for the War Dept. in that city, has been returned to the inactive list of the M. R. C.

Lt. John A. Conley of Penn Yan, has been ordered to return to his home, after having completed his course of instruction at Plattsburg.

Dr. Grover W. Wende of Buffalo, our Associate Editor,

has been called to Washington by the Surgeon-General to assist in planning a campaign against venereal diseases. He expects to return to Buffalo toward the end of November.

Capt. Chas. W. Selover of Stanley, and Lt. Benj. H. Dike of Rochester, have been ordered to Newport News for duty with the 302d Stevedore Reg.

Lt. Maurice D. Barnette of Watertown, has been ordered to the Walter Reed General Hospital, Takoma Park, D. C., for duty as a surgical assistant.

Lt. W. L. Weeden of Clifton Springs has been ordered to duty at Camp Hancock, Ga.

Lts. Victor A. Tyrasinski, Buffalo; Lloyd W. Ballantine and John J. Corbett, Syracuse, have been ordered to Camp Taylor, Louisville, Ky., for duty in connection with sanitary trains.

Capt. John R. Bradley of Rochester, Lts. H. W. Culbertson, Buffalo, Theron B. Bond, Cuba, have been ordered to Ft. Oglethorpe for instruction.

Lt. T. G. Tousey of Rochester has been ordered to Ft. Ontario, N. Y., for duty with Field Hospital and Ambulance Companies.

Lt. P. J. Barone, Buffalo, has been ordered to Garden City, L. I., for duty.

Lt. F. J. Garlick of Rochester has been ordered to the Neurologic School, U. of P., Philadelphia, for intensive training in brain surgery.

Dr. F. C. Purcell of Jamestown, has been commissioned 1st Lt. and surgeon in Co. E, 74th Reg. for state service.

Lt. H. B. Wertz of Buffalo, arrived in England about the middle of Oct.

Dr. Karl F. Eschelmann of Buffalo has been appointed surgeon to the 74th Battalion, for state service.

Capt. Frederick T. Van Beuren of N. Y. City, has been ordered to special duty in Buffalo, Rochester and Utica, in connection with the M. R. C.

Lt. Abraham Lebendig of Rochester has been ordered to Cornell Medical College, N. Y. City, for instruction in military roentgenology.

Capt. James E. Holden of Collins has been ordered to duty at Ft. Adams, R. I.

Lts. Jerome A. Murphy and Alfred H. Vogt of Buffalo, and Ernest G. Gilmore of Johnstown have been ordered to Ft. Oglethorpe, Ga., for instruction.

Capt. Ira A. Allen of Ludlowville has been ordered to Ft. Slocum, N. Y., for duty.

Lt. Scott B. Fisher of Syracuse, has been ordered to Mineola, L. I., for duty in connection with the Aviation School.

OBITUARY

Readers are requested to report promptly the death of all physicians in Western New York, or former residents of this region, or graduates of any medical school in Western New York, and to notify the families of the deceased of our desire to publish adequate Obituary notices.

Dr. Solomon H. Peck, N. Y. University 1862, died at his home in Oneonta, Sept. 2, aged 92. For many years he was a practitioner of Ithaca.

Dr. Benjamin W. J. Worrall, University of Kansas 1906, Lt. U. S. N., was killed in an automobile accident at N. Tonawanda, Sept. 15.

Dr. G. P. Howe of Boston, Mass., was killed in action, Sept. 28, while on duty with the British forces in France. He is the second member of the Medical Reserve Corps to have died from strictly military casualties. We understand that no officers outside the Medical Corps have died of wounds and that the deaths from hostilities have been limited to this corps, though several officers and privates of the line have died of disease or accident, including those due to practice with bombs and fire arms in France, or from strictly military risks, as with aeroplanes and from attack while on guard duty in this country. Since Sept 18, up to Oct 20, deaths in the M. R. C. number 3, all in men on duty at camps, one due to cutting throat, probably suicide, 2 to drowning, one of the latter in a gallant attempt at rescuing another.

Dr. James N. Riley, Atlanta Medical College 1857, a Confederate surgeon, died at his home in Stamping Ground, Ky., Sept. 18, aged 90.

Dr. James A. Gibson, Western University of London, 1890, died at his home in Buffalo Oct. 4, aged 50, of pneumonia, complicated with cardiac disease. He was born at London, Ont., June 3, 1867, and received his collegiate education at the University of Toronto. He came to Buffalo 25 years ago and always took a prominent part in professional activities. He was a member of the old Fitch Hospital staff, since 1893, of the Roswell Park Medical Club, has been Prof. of Anatomy and Secretary of the Faculty in the Medical Dept., University of Buffalo, since 1910 and was affiliated with the various local and general medical societies. He was an honored member of the Nu Sigma Nu Fraternity and was a Mason in high standing. The funeral was held at Calvary Church, Sunday, Oct. 7, being attended by large delegations from the Medical Society of the County of Erie and the Buffalo Academy of Medicine, the students and the Masonic body, the Roswell Park Medical Club, the Faculty and other organizations. Dr. Gibson had the force and efficiency often attending quiet and modest natures and was beloved by all.



(Portrait kindly furnished by Buffalo Express).

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Buffalo Medical Journal

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BUFFALO MEDICAL JOURNAL

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Number 5

ORIGINAL ARTICLES

The right is reserved to decline papers not dealing with practical medical and surgical subjects, and such as might offend or fail to interest readers. Contributors are solely responsible for opinions, methods of expression and revision of proof.

Some Observations on Gastric and Duodenal Ulcer.*

By J. C. JOHNSON, M. D., Atlanta, Ga.

Several years ago we published a review of forty cases of Ulcer. In this review we referred especially to the frequent association of ulcer with hyperchlorhydria, hypersecretion and gastrosucchoresis, and endeavored to draw some conclusions as to the relation between them all. It appeared that there was no symptom common to these disorders always present, and no condition in any which might be considered pathognomonic of ulcer. But we believed then, and still are of the opinion, that ulcer is no more an entity than is any other disease of the stomach or duodenum, and that even as a clinical entity its existence may be questioned. However, before an intelligent idea can be formed as to the relation between two or more concurrent diseases we must first have definite knowledge of each separate disease, and must also be sure that what is classed as disease is something more than a phase or an epoch of disease.

In any event a study of Ulcer cannot be comprehensive which does not take into account each distinct process which may predispose to it or which may be present with it.

Experimental production of Ulcer has taught us much of value. But experiment cannot prove everything about anything. Art cannot create the conditions which develop as a sequence of orderly physiological perversion.

Surgery has given us a closer view of the morbid anatomy of Ulcer and of the deformities which often follow it. But

*Read at meeting of American Gastro-enterologic Assn., Atlantic City, June 1, 1917.

surgery can never determine its cause nor depict the tissue change incident to its development. Fortunately, there are other ways of knowing things than by seeing them, and other ways of finding out than by probing. The very problems which call for radical action often escape the eye and are discernible only to reason and common sense.

The truth about ulcer has its foundation in the Stomach and Duodenum themselves, and it can only be expressed in terms of pathology most intimately related to their functions. Upon this presumption we have tabulated other cases, fifty in number* in order to enlarge our data and add something to our knowledge of this very common and very serious affection.

It may be noticed that six or twelve per cent. of these patients were under twenty years of age.

Seventeen, or thirty-four per cent., between twenty and thirty.

Fourteen, or twenty-eight per cent., between thirty and forty.

Ten, or twenty per cent., between forty and fifty.

Three, or six per cent., between fifty and sixty.

Three, or six per cent., between sixty and seventy.

Thirty, or sixty per cent., were males. Twenty, or forty per cent., were females.

Various occupations were represented.

The history of previous indigestion varied from six months to a life time.

The highest Hgb. was 88. The lowest 60. Highest B. P. 195; lowest 90.

In fourteen, or twenty-eight per cent., the greater curvature of the stomach was below the umbilicus—in some instances reaching almost to the pubis.

In eighteen, or thirty-six per cent., the greater curvature extended to the umbilicus.

*Of these, 28 were Duodenal, 16 Gastric, and 6 Pyloric.

In eighteen, or thirty-six per cent., the position and size of the stomach were apparently normal.

Thirty-nine, or seventy-eight per cent., were constipated.

In nine, or eighteen per cent., there was a daily stool.

Two, or four per cent., had diarrhea.

Local tenderness was present in thirty-nine, or seventy-eight per cent. In thirty, or sixty per cent., the tenderness or soreness was referred to the Epigastric region. In four, or eight per cent., to the right hypochondrium. In two, or four per cent., to the umbilicus.

*Of these, 28 were Duodenal, 16 Gastric, and 6 Pyloric.

In two, or four per cent., to the left hypochondrium. In one, or two per cent., to the Xiphoid angle.

Next in frequency to soreness was pain,—present in thirty, or sixty-eight per cent. In twenty-three, or forty-six per cent., to the right hypochondrium, epigastrium and left hypochondrium, to the pectoral region. In two, or four per cent., to the right hypochondrium. Epigastrium and left hypochondrium. In two, or four per cent., to the left iliac. In one each, or two per cent., respectively to the left hypochondrium, Xiphoid angle, umbilical regions.

Nausea was present in fifteen, or thirty per cent. Vomiting in twelve, or twenty-four per cent. Hemorrhage was rare. Occult fecal was positive in six, or twelve per cent.

In twenty-one, or forty-two per cent., there was evidence of family tendency to gastro-intestinal disorder.

Four were members of the same family—including father, mother, and two sons.

In twenty-four, or forty-eight per cent., the history of family tendency was negative. In the remaining five, or ten per cent., the history was indefinite.

Six, or twelve per cent., had appendectomy, prior to examination, one or more as long as seven years.

In one the gall bladder had been drained. In one tonsils had been removed.

The extent of the examination and the methods used in each case are suggested by the table. Besides, no effort was spared to discover everything in the history and general condition of the patient that could have any bearing on the ulcer. Only that which we have considered pertinent is included in this report.

We do not agree with those who say that a diagnosis of ulcer can always be made by telephone or by mail. Ulcer is sometimes present when it is not suspected, and sometimes suspected when it is absent.

We are not sure that the most careful surgeon may not overlook an ulcer when he is looking for it. All ulcers are not the same in size, site, or period of development. Positive diagnosis of ulcer can be based only upon finding one.

There are some who say that the stomach tube, the laboratory and other means of diagnosis employed by the internist are unreliable and of little value. The ground upon which these observers stand is so remote from this particular field of scientific progress, they hear no sound from without but the echo of their own voices. They see nothing beyond the horizon of their own sphere. They are so firmly fixed in their opinions by the centripetal nature of their thoughts no ideas

but their own can have accession, persuasion or cohesive power.

We would pass this point unnoticed did it not quicken us to reaffirm our faith in those verities which they deny without first having knowledge of them. The science of medicine is too deep and too broad for any man however tall to stand upon its bottom anywhere and reach from one extreme to the other.

Unless one has had a wide experience in certain lines of work by what authority may he speak so assuredly of what can and cannot be accomplished by other methods than his own. By what inspiration can he know what it has required years of arduous labor for others to attain.

It is inconsistent to say the least of it to speak of the danger of cancer from ulcer as a base and of the need of early diagnosis, and at the same time to decry the means we have without supplying something better, or even suggesting something just as good.

It is not easy to distinguish between gastric and duodenal ulcer in every case. Pain is not invariably present in either, nor does it always occur at a time so definite that a diagnosis may be based upon this symptom alone. The point of local tenderness in both also varies, as does the pain, according to the position of the stomach and duodenum, and the character and extent of functional disturbance. Even with malignant ulcer far advanced there may be an absence of both pain and soreness.

Stenosis alone is not diagnostic of ulcer, neither does it always enable us to locate one when it exists. Only by determination of all the conditions present can the necessary knowledge and significance of ulcer be obtained, and the needs of the patient be intelligently supplied. There is no symptom so slight, or seemingly without value which may with reason be disregarded.

For location of ulcer there is nothing more reliable than the Einhorn Thread Test, and for detection when in doubt it is of equal service.

The X-ray will not picture an ulcer in its early stages or before a crater has developed. On the other hand it may show a deformity resembling that due to ulcer, and yet the trouble may be one in which the stomach is not primarily involved.

The table shows that in 94% the Thread was positive, whereas the X-ray when used was positive in 38%.

The Thread may not be positive for ulcer on the greater curvature towards the splenic end or where the ulcer has healed, or is healing.

· There is no theory of ulcer convertible into fact which detaches its formation from the histological and biological forces of normal tissue change.

We have before made occasion to express the belief that the primary causes of disease are overwork, underwork, injury and infection. If this classification is correct, it narrows the field of our present investigation and simplifies the result.

Fatigue of any organ predisposes to disease, even if it may not constitute a condition which within itself is technically disease. Certainly, it is often a controlling factor in the conduct of disease. The predisposition created by fatigue rests essentially in impairment of nutrition. But it is misleading and confusing to regard nutrition as a process. It is not a process, but a condition the result of many processes—and hence cannot be the cause primarily of any other process.

Fatigue of the stomach may be the result of effort to overcome resistance in some other organ to which it is intimately related, as the duodenum, liver, or heart. It may follow excessive functioning stimulated or required by errors in diet. It may also develop from continued exercise within normal limits, but with insufficient material for repair. The duodenum may suffer in a similar way from similar causes.

It is significant that in 42% of the patients there was a family history of gastro-intestinal disorder, and that four of the patients were father, mother and two sons. This suggests that a certain habit of metabolism, or state of nutrition predisposes to ulcer. Yet in others this history is lacking or indefinite. Whether ulcer be local or constitutional in origin, somatic metabolism as a causative factor however potent and essential must be more or less indirect. And even if essential, and the primary importance of gastric and duodenal function is denied, it remains to be explained why these organs and not others are selected for the local manifestation of the general disease.

Traumatism predisposes to actual disease, but unless the continuity of the tissue is disturbed to the extent that healing is impossible, disease does not follow. Even when the function of the tissue has been impaired before the injury is received, it resumes its former tone and efficiency when the disorganization from the injury has been overcome—unless infection supervenes. When infection is added to traumatism, or occurs independently, the morphological changes which follow do not represent all the characteristics of necrosis and reformation found in classical ulcer. Furthermore, before infection can occur, can produce, or become active in a morbid process there must pre-exist histological and functional condition of the tissue not normally a part or product of

TABLE

Rec.	No.	Age	Sex	Occup.	Indigestion History	Hgb.	B. P.	Position	Local Tend.	Pain	Nausea	Vomit	Test Meal	Thread	Stools	Feces	Occult	JCJ
689	24	F	F	H W	Several yrs.	80	115	Sub. U	Pit	L-Ilac	Plus	Neg	IV 54 88	Pos	C	Neg	Neg	Neg
290	41	F	F	H W	Several yrs.	75	110	Sub. U	Neg.	L. Epig.	Plus	Plus	IV 46 72	Neg	C	Neg	Pos	Pos
869	41	M	M	Farm	Seven yrs.	80	130	To U	Neg.	Pit	Plus	Plus	III 80 108	Pos	C	Neg	Pos	Pos
62	26	F	F	SM	Ten yrs.	80	110	Sub U	U	Neg.	Neg	Neg	II 62 78	Pos	R	Neg	Neg	Neg
336	35	M	M	Atty.	Several yrs.	88	135	Pit	Pit	Pit 3 hrs. p.c.	Neg	Neg	III 84 90	Pos plus	C	Neg	—	—
514	21	F	F	School	Nine yrs.	—	—	Situ.	Pit	Neg.	Neg	Erect	III 40 70	Pos plus	C	Neg	—	—
505	32	M	M	Merch.	Eight yrs.	85	125	Above U	Pit	Lr. p.c.	Neg	Neg	IVI 56 80	Pos	C	Neg	Pos	Pos
593	45	M	M	Merch.	Fifteen yrs.	88	135	To U	R Cost	R. Ilac	Plus	Neg	IV 86 104	Pos	C	Neg	Pos	Pos
238	21	M	M	Clerk	Eight mos.	70	125	Situ.	Neg.	Stomach	Neg	Neg	IX 66 100	Pos	C	Neg	Pos	Pos
540	36	M	M	Farm	Fifteen yrs.	70	145	To U	DR. & P	Pit	Neg	Neg	III 62 116	Pos	C	Neg	—	—
375	23	M	M	Atty.	Two yrs.	85	115	To U	Neg.	Pit	Neg	Neg	IVI 42 78	Pos	C	Neg	Pos	Pos
317	34	F	F	House	Years	70	90	Sub U	Pit	Pit	Plus	Neg	VI 54 88	Pos	C	Neg	Pos	Pos
215	26	M	M	—	Several yrs.	80	100	Sub U	Pit	Neg.	Neg	Neg	III 64 80	Pos	C	Neg	—	—
916	28	M	M	Drug	Eight yrs.	80	120	To U	Pit	Pit	Neg	Neg	III 80 100	Pos	C	Neg	Neg	Neg
270	44	M	M	Farm	Ten yrs.	78	120	Situ.	Left C	L-Costal	Neg	Neg	IV 78 98	Pos	C	Neg	Neg	Neg
263	37	M	M	Farm	Since child	78	105	Sub U	Pit	Neg.	Plus	Neg	IV 49 65	Pos	C	Neg	Neg	Neg
167	18	M	M	Neg	Five yrs.	80	90	To U	L pit	R pit	Neg	Pos	III 44 66	Pos	C	Neg	—	—
339	50	F	F	House	Several yrs.	75	115	Situ.	Pit	L pit	Plus	Neg	III 50 70	Pos	C	Neg	—	—
210	38	F	F	—	Two yrs.	75	140	To U	Pit	Neg.	Neg	Neg	III 70 100	Pos	C	Neg	—	—
615	52	F	F	H	23 years	75	145	To U	Pit	Side to Side	Neg	Neg	III 62 94	Pos	C	Neg	Pos	Pos
521	31	F	F	H	Years	80	130	To U	Pit	Neg.	Pos	Pos	III 26 92	Pos	R	Neg	Neg	Neg
167	34	F	F	H	Six yrs.	75	130	To U	Gast.	Umb.	Pos	Neg	III 46 64	Pos	C	Neg	Neg	Neg
46	34	F	F	H	Six mos.	60	115	To U	Pit	Neg.	Neg	Neg		Pos	C	Neg	—	—

39	46	M	Capdl.	Fifteen mos.	75	100	To U	Neg.	Neg.	Pos	Neg	SI 30 52	Pos	Lax	Neg	—
93	28	M	Farm	Fifteen yrs.	80	120	To U	Neg.	Neg.	Pos	Pos	SV 80 100	Pos	C	Neg	Neg
88-A	44	M	Sales	Ten yrs.	80	105	Sub U	Xphold	Neg.	Neg	Fred	SVI 70 88	Pos	Reg	Neg	Pos
487	23	M	Bank	Nine mos.	80	125	Situ.	Pit	Pit	Neg	Neg	SII 66 86	Pos	C	Neg	Neg
842	28	M	Clk.	Months	75	130	H G	Pit	L pit	Neg	Neg	SVI 46 68	Pos	C	Neg	—
194	23	M	—	One & hf. yr.	80	115	Atonic	Pit	Neg.	Neg	Neg	SVI 80 114	Pos	D	Neg	—
179	19	M	Clerk	One yr.	80	120	Situ.	Neg.	Neg.	Neg	Eruct	SIV 42 64	Pos	C	Neg	—
539	52	F	House	Years	75	120	Sub U	Neg.	Neg.	Neg	Neg	3as 64 94	Pos	R	Neg	—
721	67	M	Mill	Years	80	130	Sub U	Pit	Pit	Neg	Neg	3KVI 74 100	Pos	C	Pos	—
88-B	18	M	Clerk	Five yrs.	83	100	Situ.	R pit	Pit	Neg	Neg	SVI 108 132	Pos	C	Neg	—
44	36	F	Hs	Years	75	160	Sub U	—	Neg.	Neg	Neg	3as 14 32	Pos	R	Neg	—
335	36	F	Hs	?	75	120	Situ.	Pit	Pit	Neg	Pos	3as 52 72	Pos	C	Pos	Pos
629	47	M	Atty.	Twenty yrs.	—	—	Situ.	—	Pit	Neg	Neg	3K 58 70	Neg	C	Pos	Pos
479	30	M	Sales	Eighteen yrs.	80	110	Situ.	Xiph	Ache pit	Neg	Neg	3XI 70 100	Pos	R	Pos	Neg
352	25	F	Hs	Five yrs.	80	—	Situ.	Pit	Pit	Neg	Neg	3Ias 62 100	Pos	C	Neg	—
												44 76				
533	45	F	Hs	?	78	115	Situ.	Neg.	Neg.	Neg	Neg	SI 22 42	Pos	C	Neg	Pos
864	47	F	Hs	? yrs.	—	—	Sub U	Pit	Pit	Neg	Neg	3as 50 64	Pos	C	Neg	—
108	36	M	BK	Twelve yrs.	83	135	—	Pit	Neg.	Neg	Neg	3IX 42 66	Pos	R	Neg	Pos
462	40	M	RR	Seven yrs.	80	120	—	Pit	Pit	Pos	Pos	SII 72 100	Neg	C	Neg	Pos
367	31	F	Hs	One yr.	80	115	To U	Pit	Pit	Pos	Pos	SVI 66 86	Pos	C	Neg	—
385	65	F	Hs	Years	70	195	Sub U	Pit	Neg.	Pos	Pos	SIV 68 92	Pos	R	Neg	Neg
909	28	M	Trans	Yr. plus	78	130	Situ.	Pit	Pit	Pos	Neg	SII 36 48	Pos	C	Neg	—
355	29	M	Sale	Six mos.	80	116	To U	Pit	Neg.	Neg	Neg	SIV 84 116	Pos	Reg	Neg	—
850	19	M	Farm	Eight yrs.	80	120	To U	Pit	L pect	Neg	Neg	SVI 78 104	Pos	C	Neg	Pos
37	28	M	Plant	Two yrs.	80	115	To U	Pit	Pit	Neg	Neg	3IX 72 92	Pos	C	Pos	Pos
392	24	M	Sale	Ten yrs.	80	120	To U	Pit	R pit	Neg	Neg	3IV 74 96	Pos	C	Neg	—
267	48	M	Dnt	Five yrs.	—	—	Situ.	Neg.	Ret RL	Neg	Neg	3IV 86 104	Pos	C	Neg	Pos

organic life,—unless there is possessed by some an immunity which is lacking in others. So far, we have nothing upon which to build a theory of immunity from ulcer.

The presence of Hcl. in the stomach is not favorable to pathogenic bacteria. Even when Hcl. is absent the protective power of normal gastric protoplasm may remain and repel invasion by micro organisms. This is often seen in *Achylia Gastrica*. If it were a fact that the protoplasm cannot be normal with Hcl. absent, it would only lend support to our contention that the majority of gastro-intestinal diseases are primary in their essential nature, and that ulcer as a feature is not the result of any single cause but of an association of causes. But in a majority of ulcer patients there is an excess of Hcl.—which leaves no room for argument that general impairment of gastric protoplasm is either a singular cause or a result of ulcer. Neither does it add anything to the theory of infection. Especially untenable is the idea advanced by some that ulcer is not only due primarily to infection, but that the appendix is the source of the infection. We found ulcer in 7 or 14% of the cases months or years after the appendix had been removed, and after other so called surgical lesions had been repaired. It is evident that the ulcer in these cases was independent of the appendix or was overlooked at the time of the operation. In either event, the need of more comprehensive knowledge and accurate diagnosis of gastro-intestinal diseases is hereby clearly demonstrated.

Much of the fallacy in modern teaching has its source in efforts to build the whole truth out of half the substance. Ulcer is not a ready made, hard and dried disease, but a gradual outgrowth of successive perversions in nutritive and functional activity, and only by appreciation of this fact and by proper employment of the means which it supplies can the best results from treatment be obtained.

Internists know that ulcers do get well without the knife, and that after many years these patients have all the appearance and comfort of perfect health. On the other hand, it is true that there is no successful treatment for some ulcers, or for the complications which they bring about, except by operation. But the ideal operation for ulcer will be selected only when the surgeon keeps before him the complex relation of the alimentary functions, and the more complex forces which make possible and maintain these functions normally, and brings all this to bear in interpreting the particular requirements in the field of operation. A true surgeon always does this. His task is made easier and his burden lighter if aided by the previous observations and present counsel of

the internist. Their combined intelligence is not too much for any case.

For lack of these considerations or for lack of opportunity to apply them, operations often fail not only to restore to normal the parts primarily affected, but also fail to preserve that measure of compensatory and reciprocal action which has remained despite the disease.

Typhoid Treated With Gay-Claypole Vaccine. Frederick C. Gay of Berkeley, Calif., *Jour. of Lab. and Clin. Med.*, Aug., reports a series of 98 cases with 7 deaths. The vaccine is used intravenously and is a multivalent, sensitized sediment. One-third of the cases showed a critical defervescence after the first or second injection and a permanent normal within a week. In most of the others, marked improvement was shown and no untoward results ascribable to the method were observed. (Note: 75 years ago, when antivariolar vaccination was the only one known, "we" and others published many references to the relation of therapeutic and prophylactic vaccination. This term now has a much broader use, not only in the numeric sense as applying to various diseases, but in the sense of applying to a much larger variety of preparations, with very little detailed analogy. It is well known that a sharp practical distinction must be made between prophylaxis and therapeutics but the general principles underlying this distinction, the exact differences applying to various diseases from which germ products are theoretically or practically obtainable, and the discriminations necessary according to the exact kind of product employed, have not been satisfactorily worked out. Superficially considered, anything that will prevent, ought to relieve a disease, but this assumption is conspicuously and dangerously incorrect in the present instance. We suggest this subject to bacteriologists and chemists for discussion).

Mesenteric Cyst With Torsion of Intestine. Villar (*ibid.*) reports a case in which abdominal crises had occurred from an early age (present age not stated), with considerable intermissions, death occurring in the last crisis without intervention. A round, tough, mobile tumor of the size of an ostrich egg was found involving the middle of the transverse colon, attached by a pedicle of mesentery twisted on itself. Microscopic examination classified the cyst as serous. Loumeau considered it congenital, due to ectopy of the intestinal epithelial cells. Freche expressed the opinion that such cysts are analogous to the aberrant sebaceous glands sometimes found on the buccal mucosa.

The Loppered Milk Diet.*

Including References to its Benefits in Post-Operative Disturbances and Metabolic Defectives.

DR. GEO. N. JACK, Buffalo.

The value of a loppered or thick milk diet in prolonging life, restoring health and preventing sickness has long been known. Sour milk has been one of the principal features of the diet in Turkey, Roumania, Bulgaria and Servia for many centuries. In about 1902, Prof. Massol of Geneva, noticed that the peasants of these countries lived to an astonishing age. A count of them showed that over five thousand of the peasants of Bulgaria at one time were over one hundred years old. They lived on Yoghourt, a preparation of sour milk. It was their principal article of food and each ate over a quart of it a day.

Subsequent experiments showed Prof. Massol that what made sour milk so healthful was the presence of lactic acid. The lactic acid results from the fermentation. This acid owing to its antiseptic action, tends to prevent diseases originating in the gastro-intestinal tract.

If we divide the first essentials for the health and life of all animals into quarters, we would have (a) inherited blood vitality, and metabolism, (b) air, (c) food and water, (d) suitable environment, including weather and climatic conditions. It would follow then that all functional sickness is caused by a perversion of one or more of the above mentioned first essentials of health. This would give to diet one-fourth of the responsibility in preventing and curing functional sickness.

The blood must draw by metabolism from our food and air, under a suitable environment, what is necessary for life and health.

Milk contains all the minerals, chemicals, substances or elements necessary for the maintenance of perfect health. If an individual then does not thrive on a milk diet, the milk is either poisoned by the contents of the gastro-intestinal tract or the blood is too feeble to metabolize it.

Owing to the fact that loppered milk has fermented or soured, it is practically digested before it is eaten, therefore it constitutes an ideal predigested food. Loppered milk, being a predigested food, is metabolized or transformed into life energy or vital force and muscle with but little tax on the

*Read before the Medical Association of Central New York, Oct. 18, 1917, at Auburn.

digestive organs. This renders loppered milk an ideal diet in cases of feeble digestion or metabolism.

Auto-intoxication or self poisoning from the gastro-intestinal tract is one of the chief causes of functional sickness. The loppered milk diet, therefore, through its antiseptic action, tends to prevent sickness as well as to cure it.

While on a strict loppered milk diet, the stools as a rule are practically odorless, neutral in reaction and show no, or but little evidence of fermentation or putrefaction.

My five years experience with the loppered milk diet has demonstrated to me its efficiency in the prevention of seasonal, functional, food and weather sicknesses such as summer autumnal coryza, asthma, digestive or diarrhoeal troubles and rheumatism; also the winter spring, functional food weather sicknesses as colds, lagrippe, bronchitis, pneumonia, eczema, sugar diabetes and asthma.

My method of obtaining loppered milk has been as follows: The first essential is to obtain rich milk from healthy cows that have been properly fed and cared for. After milking the milk should be carefully strained and cooled with a milk cooler. After cooling the milk should be bottled in a clean sanitary room and stored in a coagulating room such as a light clean cellar with a temperature of about 60 degrees. This cellar should be well ventilated and used for no other purpose.

The milk after being bottled should stand without caps on, thus allowing the milk to lopper in the open air. After the milk has coagulated, the bottles should be capped and delivered to the consumer's house. The consumer should then remove the caps and store the bottles in an ordinary pantry where the loppered milk will keep from a week to ten days.

Those on the loppered milk diet should keep at least ten bottles ahead, for two reasons, first the older the better and second so that they will not have to skip a feeding as it is a great disappointment for one on this diet to be compelled to go without it.

Loppered milk, when properly loppered, separates into whey at the bottom, curds in the middle and cream on the top. From four to six ounces of whey generally forms in a quart of good rich milk. A colony of mould generally forms on top of the cream which should be removed before emptying the bottle.

Loppered milk seems to have a better flavor if loppered in paraffined spruce wood fibre containers in place of the glass bottles.

My method of prescribing the loppered milk diet is as follows: I have my patients procure a quart butter churn in

which a quart of the loppered milk can be churned up at one time. Two or three minutes of brisk churning of this loppered milk gives it an even, rich, creamy consistency, with a delicious flavor that agrees with the most delicate stomachs.

Patients that are greatly emaciated or badly reduced in health, I generally restrict to a well cooked fruit, cereal diet in conjunction with the loppered milk. I endeavor to have them take about a pint of freshly churned loppered milk through a tube with buttered toast or a cheese or butter sandwich with a baked apple every two hours.

All of my emaciated cases taking the loppered milk have done so in conjunction with indicated medicinal treatment. After one of two weeks treatment with the restricted loppered milk diet, my emaciated patients that are doing well are generally put on a more liberal diet, having three regular meals a day. At this period I try to have my patients take a pint of loppered milk at meals and between meals, or about five pints a day. Many of my patients have averaged six pints of loppered milk a day for years.

A knowledge of what has now come to be known as anaphylaxis has added a new significance to the diet question.

In my Pathology of Asthma that I wrote in 1901 or one year before Richet coined the term anaphylaxis, I gave the following definition of asthma:

It will be seen, then, that asthma is not a disease by itself having a well-established entity, but that it is only a symptom, a part of a vicious circle, or an abnormal biochemical and complex pathological process, originating usually in the intestinal canal, through a longstanding intestinal indigestion and toxemia, with faulty absorption and metabolism, producing a toxic or lymphagenous chyle that generates an unstable blood, characterized by its extremely varied, numerous and alarming paroxysmal, morphologic changes, often alternating between a lymphocytosis, an intestinal toxemic leucocytosis, or a marked anemia; accompanied anatomically by a hyperplasia of the lymphatic and glandular structures and clinically by a most wretched and agonizing dyspnea. This definition makes it plain that the one characteristic pathological feature of asthma is the unstableness of its blood.

This definition shows the relationship between asthma and anaphylaxis and also shows that asthma is not due to anaphylaxis but to an unstable blood. The unstable blood of the asthmatic is hypersusceptible and sensitized to numerous food and weather conditions which causes it readily to undergo the anaphylactic phenomenon.

The blood of the asthmatic between attacks generally appears quite normal, but just before or during an attack we can characteristically detect trouble. The toxic leucocytic blood, for instance, just before or during an attack, as a rule flows in small, slow forming black drops, with a high viscosity, a rapid coagulation and a thick consistency. The black drop with its diminished vitality slowly enters the test paper and shows a high hemoglobin scale. If a few drops of hydrogen peroxide be added to a fresh drop of this toxic blood on a cover glass, it generally gives a rapid dirty brown reaction while that of normal blood is pink. The leucocytes are increased and show an amyloid degeneration. The oesinophile cells are increased. Often 20 to 50% of the erythrocytes are star shaped or irregular, showing a granular disintegration. The roloux formation is generally absent. It as a rule requires an extraordinary amount of pressure on the cover glass to differentiate the cells of this toxic blood, as they tend to form in an opaque, shapeless adherent mass.

During the last twenty years in conjunction with a general practice I have made a study of 924 cases of asthma and their relation to food and weather conditions and I have come to the following conclusions:

I. The cause of asthma and summer autumnal coryza is an unstable blood.

II. Owing to the instability of the blood of the asthmatic and summer autumnal coryza subjects, it is rendered hypersusceptible and sensitized to numerous metabolic, gas, weather and food conditions.

III. I consider the blood as the biochemical medium between the weather on the lung skin and the food on the gastro-intestinal side.

IV. The hypersusceptible and sensitized blood of the asthmatic and the summer autumnal coryza subject is sufficiently disintegrated to produce attacks (1) automatically, (2) by unfavorable food conditions, (3) by unfavorable weather conditions, (4) by toxic gas conditions, and (5) by a combination of all of the above conditions. These have occurred in about the following ratio:

(a) In about one fifth of all my asthmatics their unstable blood has been automatically, biochemically, metabolically, glandularly or functionally periodically disintegrated sufficiently to produce an attack of asthma.

(b) In one fifth of all asthmatics their unstable blood is sufficiently disintegrated by unfavorable food conditions to produce attacks of asthma.

(c) In about one fifth of all my asthmatics and all summer autumnal coryza subjects their unstable blood has been suf-

ficiently disintegrated by unfavorable weather conditions to produce attacks of coryza and asthma.

(d) In one fifth of all asthmatics their unstable blood is sufficiently disintegrated by toxic gas conditions to produce attacks of asthma, as swamp gas, animal excreta gas, gas from decomposing vegetation, night ground gas, burning sulphur gas, etc.

(e) In one fifth of all asthmatics their unstable blood is sufficiently disintegrated to produce attacks of asthma by a combination of two or more of the above mentioned automatic, food, weather and gas blood disintegrating agents.

V. The unstable blood of the asthmatic runs low in certain minerals or chemicals that must be supplied in the form of medicines until it can draw the same from a prescribed diet that is rich in the minus minerals or chemicals.

VI. The treatment of asthma could be likened to the unlocking of a combination lock; one may know all the combinations but one and yet he will not be able to unlock the lock until he determines the missing combination.

(To be concluded in January issue.)

Experimental Typhus. M. H. Neill, Passed Asst. Surgeon, U. S. P. H. S., Pub. Health Reports, July 13, alludes to the striking similarity between the lesions of typhus and Rocky Mountain spotted fever, though their non-identity is apparently demonstrated by amynologic tests. 26 of 37 Guinea pigs, killed at the height of febrile reaction after intraperitoneal injection with Mexican typhus virus showed lesions, consisting of petechiae or considerable haemorrhages in the cremasteric fascia and immediately beneath the visceral laminae of the tunica vaginalis, the skin of the scrotum appearing normal. These are milder in character than similar lesions of Rocky Mountain fever.

Multiple Intracranial Propectiles. V. Morax, Ann d'Oculistique, May, describes a military case. Mental hebetude and diminution of vision were noted almost immediately but improvement occurred and no ocular lesions were found at the first examination. By X-rays and at autopsy, three fragments were demonstrated, one in the right occipital lobe, with thrombosis, another which had lacerated the same lobe and had been arrested by the tentorium cerebelli, a third had reached the same lobe, giving rise to a purulent leptomeningitis which resulted in death. Ocular lesions observed during the course of the process were: homonomous hemianopsia, neuro-paralytic keratitis, paralysis of the dextro-gyric muscles.

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Yearly Volume 73

DECEMBER, 1917

Number 5

What Has Become Of

Cheap wood alcohol, that any one could distill from potato peelings, weeds and other vegetable substances containing cellulose, by a simple, cheap, portable apparatus?

Gasoline obtained by a method, approved by government experts, from less volatile parts of crude petroleum?

Gasoline derived from shale?

The green powder, pronounced practical by Henry Ford, to be added to water at a cost of a cent a gallon, to drive automobiles?

The method to make dyes from autumn leaves, also said to have been approved by the government?

The motor that would pick up aerial electric current and render power available to any one possessing the machine?

The numerous internal antiseptics, non-toxic and producing absolute sterilization?

The magnetic submarine destroyer exploding by pressure of water when the submarine descended below the lowest level of a floating vessel?

The Rule of Three.

2,000,000 : 20,000 :: 4,000,000 : 12,000. It is not correct mathematically but it is all right according to various authoritative statements. If it will take at least 20,000 surgeons to care for an American Army of 2,000,000, how is it that we are assured that the British (meaning British Isles)

Army numbers 4,000,000 and that the total number of English Army surgeons is only 12,000!

BOOK REVIEWS

Books mentioned may be inspected at and ordered through this office. So far as possible, books received in any month will be reviewed in the issue of the second month following. Pamphlets, quarterly and similar periodicals, reports, transactions, etc., will, as a rule, merely be mentioned.

Reference Hand Book of the Medical Sciences. Vol. 8, finishing the alphabet and including an appendix and index, has appeared, completing the third revised edition begun in 1913.

The publishers, Wm. Wood & Co. and the editor, Dr. Thomas Lathrop Stedman, are to be congratulated, first of all on the mere fact of having completed this monumental task. The mere bigness of it impresses one so much that considerations of quality take second place. Imagine the responsibility for some eight million words, and four thousand illustrations. Of course, the work has been divided among many authors but even so,—and we speak from definite knowledge on this point—it has been planned in detail in advance, so that all phases of medicine might be covered in the alphabetic arrangement, and critically edited. The success of the work is due to elaborate attention to details under a comprehensive plan. Omissions have been reduced to a negligible factor by years of checking the previous two editions, the first of which appeared about 30 years ago.

Medical Clinics of North America. W. B. Saunders Co., Philadelphia, bi-monthly, \$10 per year. Sept. 1917, Philadelphia number; Nov. 1917, N. Y. City number.

The Rockefeller Foundation, Annual Report for 1916. Published by the Foundation, 61 Broadway, N. Y.

This deals mainly with the work of the International Health Board which has investigated various problems in a wide range of places; of the China Medical Board; and of the War Relief Commission. The Foundation has been most generously endowed with a capital of a little over 100 million, yielding close to 6%, which has been distributed from year to year in very different amounts to a wide range of philanthropies. To grasp these large sums it is necessary to resort

to simple comparisons. There are approximately 4 million automobiles in the country. Each one of these would have to contribute \$1.25-\$1.50 to make up the vast sum dispensed in a year for benevolences. If we imagine each of them to consume 500 gallons of gasoline a year, and that the government had raised this money by taxation, it would have had to increase the price a quarter of a cent a gallon to the consumer, beyond that taken as the normal standard of value, as established by the current rates for 1914 and 1915. Fortunately the government did not impose this tax.

The Practical Medicine Series. Charles L. Mix, A. M., M. D., general editor. The Year Book Publishers, 327 S. La Salle St., Chicago. 10 volumes in annual series, \$10.

Vol. 6, General Medicine, Frank Billings, M. S., M. D., and Burrell O. Raulston, A. B., M. D., editors, 347 pages \$1.50 separately.

This review of current literature has been carried on for over 10 years, in a highly satisfactory manner. The division of the literature into sections, medicine and surgery usually occupying 2 volumes each, and the grouping of smaller sections with others, offers a convenient and economic choice to those not desiring to cover the whole field of medicine and also facilitates the assembling of the notes. The excerpts are sufficiently full of references as they stand, without requiring consultation of the original sources, unless for special purposes and illustrations are frequently reproduced.

TOPICS OF PUBLIC INTEREST

Centenarians. Mrs. Annici Hawyer, born at Grafton, Vt., celebrated her 104th birthday at Aledo, Ill., Oct. 20. She was married twice, had five children, all dead, and is in good health. Mrs. Jenette Lincoln of Attica was 102 years old. Oct. 20. Mrs. Sarah Libby of N. Y. City was 100 years old Nov. 6.

German Tonnage of vessels was 3,153,724 in 1913. Of this 2,655,496 was steam.

Baseball. Several hundred thousand are said to have tried to see one of the final games between Chicago and N. Y. Nationals. 27,323 were admitted, paying \$69,403—a good index of prosperity. It is just possible that the habit of showing enthusiasm for vicarious athletics and the popular ap-

proval of that enthusiasm, may account for the vicarious attitude which many take with regard to military service.

Flour Consumption and Prices in England. The antebellum consumption of wheat flour was 238 pounds per capita, the flour being 71% of the gross wheat, the remainder being used for feed, etc. On Sept. 1, 1917, 81% extraction and the use of 20% of other grains in the flour was made compulsory, with the expectation that the per capita consumption of wheat flour would be reduced to 119 pounds a year. The price of flour is standardized at \$7.38 a barrel, about 2/3 of the regulated price in the U. S. Bread is fixed at 5 cents a pound loaf and 18 cents a 4-pound loaf. A very practical question arises for our country: We produce considerably more than our domestic consumption and still pay 150% of the English price for flour and 150-200% for bread. Even in peace, we paid nearly 80% of the war price for flour in England and 125-150% of the war price for bread. Of course, the war flour and bread are not pure wheat but this makes no practical difference in dietetic value and, so far as the ultimate consumer is concerned, other cereals, however much cheaper and abundant wholesale, usually have been and still are more expensive than wheat. We cannot make these facts seem right. P. S. This is a good illustration of the way news is allowed to filter through to the people. After letting them wonder and perhaps grow discontented with our own government, the explanation follows in two or three weeks that the English government pays a subsidy and that, otherwise, flour would be almost as expensive in England as in the U. S.

Alvarenga Prize. The award for 1917 has been made to Dr. Wilburt C. Davison of Baltimore for his essay "The Superiority of Inoculations with Mixed Triple Vaccine (B. typhosus and B. paratyphosus A & B) over Successive Inoculations of the Single Vaccines, as shown by Agglutination Curves in Men and Rabbits." The next award (\$250) will be made July 14, 1918. Essays in competition must be type-written in English, identified by a motto with sealed name and address, and submitted to the College of Physicians of Philadelphia before May 1.

Biopsy, rendered available in suspected cancer, by the Cancer Commission of Harvard University and by the N. Y. City Health Dept. is condemned by the Medical Record, Oct. 27. Without being able to speak with authority on the matter, we have understood that the general consensus of surgical opinion has long been to the effect that diagnostic

section of a suspected malignant growth should be made only when the patient is prepared for immediate operation is positive results are obtained from the examination which should, of course, depend upon technic rendering prompt microscopic inspection available. We would welcome an expression of opinion on this subject which is reopened in a very practical way by the action of the laboratories referred to.

Average Professional Clienteles. Dr. A. J. Orenstein, of Johannesburg, South Africa, a Jefferson graduate, contributes a very interesting article on Medical Education in the U. S. to the Med. Jour. of C. A., June, illustrated with diagrams. Incidentally, he states the ratio of physicians to population in various countries as follows: America (assumed to mean U. S. and Canada together) 1: 691; Eng. 1: 1,000; Germany 1: 1,940; Austria 1: 2,120; France 1: 2,834. Of course, these are ante-bellum statistics but they should assuage the anxiety regarding depletion of the American profession, expressed by so many persons without due consideration of economic facts.

Army Medical Service Statistics. The Surgeon-General's Office kindly sends the following statistics to Oct. 23. We understand that the Dental Corps is practically complete and that no more commissions of any kind will be issued from the Adjutant-General's Office till about the middle of November. Active Duty: Medical Regular Corps, 820; Sanitary Corps, 375; Ambulance Service, 46; Reserve Corps, 12,357; National Guard, 1,516. Total, 15,174.

Medical Reserve Corps: Total recommendations 17,645; declinations recorded 1,233; discharges 218; acceptances, 535 majors, 2,291 captains, 11, 411 lieutenants, total acceptances 14,237 (leaving nearly 2,000 recommendations not acted upon and nearly 2,000 commissioned but not yet assigned to duty).

Dental Reserve Corps: Total recommendations 4,696; declinations 32; discharges 3; acceptances 3,919. (The comparison is, unfortunately, to the detriment of the medical profession).

National Army, Sanitary Corps: Total recommendations 427; declinations 10; acceptances 382. Ambulance Service: Total recommendations 91; acceptances 49.

The Regular Army Medical Corps (in addition to 1 major general and 4 brigadier generals) now consists of 63 colonels, 215 majors, captains, and 131 lieutenants. It includes a dental department of 178 and a veterinary of 118.

The National Guard, beside the 1,516 medical officers, has 320 dental and 85 veterinary surgeons.

Post Office Rulings. We are asked to call attention to the increase in rates, 2 cents for postal cards, 3 cents for letters. Rates in the same city remain unchanged. Letters to the American Expeditionary Force, by name, rank and military organization, as for domestic mail. Limits of weight of parcels, 7 pounds. Do not abbreviate "American" as there is an Australian Expeditionary Force also. The BUFFALO MEDICAL JOURNAL can be remailed at 1 cent, either in this country or to any one in the American Expeditionary Force. Ordinary literary magazines (but not medical) can be put to good use without specification of addressee, by affixing a 1 cent stamp and handing to any postal employee. Such magazines will be sent to camps, in this country or abroad and distributed to soldiers' reading rooms.

Guide for Formulating a Milk Ordinance. Those interested should apply to the U. S. Dept. of Agriculture, at Washington, for bulletin No. 585.

Automobile Accidents for the first nine months of 1917 have caused more deaths than typhoid. The latter had an average of 3,934 cases and 590 deaths for the average corresponding period of the last five years but declined to 2,840 cases and 434 deaths in 1917. Automobiles caused 755 deaths, 155 in September alone.

Notice for Reserve Officers. The Surgeon-General advises physicians commissioned in the Medical Reserve to continue their practices, as assignments to active duty may be delayed. At least 15 days' notice will be given.

German Losses. Ledebour, the Independent Socialist, announced in the Reichstag, late in October, that the German deaths for the first three years of the war were 1½ million, wounded 4 million, of whom ½ million were permanently crippled, absolutely invalided 2 million. Prisoners and missing, not included but conceded by German military reports: ½ million (a low estimate). This totals 4½ million definitive losses, although Ledebour stated them at 6 million without inclusion of prisoners. The additions from the 1915-17 classes would be about 1½ million, leaving the net definitive losses about 3 million, at a conservative estimate. It is, however, a fair estimate that the initial militia of any country is 10% of the population (about 6½ million for Germany) and that

the uprising generation will just about compensate for deaths in the army from non-military causes, normal degrees of invalidism, etc. It would not compensate for the formerly prevalent camp diseases but these have been eliminated on both sides, except for the Balkan states and possibly Russia. Theoretically, the army would increase, if there were no military casualties at the same rate as the total population but in no ordinary country could the increase of births over deaths, carried forward year by year as increase in the population of one age over that of the next higher year, be more than 1% and practically, this increase would be more than offset by the increased invalidism of the higher ages in service. Thus, as a general principle, a country will be exhausted in the military sense when its aggregate definitive losses in a war of reasonable duration, equals its initial militia. Of course, there are numerous other factors to be considered in estimating the duration of the war, economic, political, psychologic, etc., as well as the purely military possibilities of the prior discovery of superior destructive means by either side. Toward the close of a war by attrition such as the present, there must be considered as disturbing factors; on the one hand, a drawing upon capital or unaccrued interest in the form of extending the age limits of service; on the other hand, a decisive victory or defeat such as was characteristic of former wars, without reference to man power in an exact quantitative sense. It is obvious that, in calculating attrition, only the side of smaller numbers need be considered, unless the attrition occurs at decidedly different actual and proportionate rates on the two sides. The calculation may further be reduced to Germany both as the dominant power in the Central Allies and because each of her allies, even including possible additions, is or would be engaged to the extent of the respective man power. It may be assumed that the final contest, so far as Germany is concerned is on the western front and it requires little geographic and political knowledge to see that the minimum defensive line—barring a final backing into a corner or forming a ring—is about 300 miles, requiring from $1\frac{1}{2}$ down to 1 million effective troops. Thus, on an attritional basis, the duration of the war may be estimated at about 3 years from Aug. 1, 1917. An estimate on any other basis requires the gift of prophecy.

Almost Literally a World War. Of the total estimated population of the globe, 1,691 (millions understood in this and following numbers), the strictly neutral countries have a population of 132, those which have broken relations with

but have not declared war on the central powers, 40. Central Allies, 177. Entente Allies 1,342. Excluding German colonies but including Asiatic Turkey, the Central Allies have a population of 143. It is extremely difficult to estimate the population of the Entente allies which can actually be drawn upon but, excluding Japan, Siam, Brazil and others which have not yet actually engaged in hostilities except by seizure of ships, etc., in their own territory, excluding Siberia and certain colonial possessions of Great Britain, France, Italy and the U. S. with sparse white populations and unavailable native populations (like the Philippines) the potential Entente population is somewhere between 500 and 700.

Very approximately, Austria-Hungary (50), Bulgaria (5) and Turkey in Europe (2) may be balanced against Italy (36), Greece (5), Serbia (4) and Roumania (7), with some allowance for Russia (117 in Europe). Asiatic Turkey (19) may be balanced against the Asiatic, African and Australasian parts of the British Empire (400-500 but only a small percentage essentially British). This leaves Germany (67) for the western front against Great Britain (46), Canada (7), France (46), Belgium (7), Portugal (6), U. S. (100), total 212. It is not meant that forces will actually be opposed to each other on this geographic basis but merely to show potential population strengths, divided roughly according to actual war fronts.

The total land area of the world (including rivers, lakes, etc., but excluding the oceans and principal seas is estimated at 57 million square miles. From this amount, about 7 is practically excluded as non-inhabitable polar regions, 5 as deserts, leaving the gross inhabitable area of the world 45. Of this, the Entente allies have about 27, the Central allies about 5.

Health Insurance. The Am. Assn. for Labor Legislation asks us to note that the British Medical Profession approves health insurance. The fact is that the British Medical Journal, commenting on the statement of F. L. Hoffman of the Prudential Ins. Co. that health insurance has been a failure in England, makes this guarded statement: "... that insurance in England is a failure is certainly open to dispute. Even if it were admitted that the results have not reached expectations, it might still be argued that any such comparative failure arose from the insurance not going far enough, or from details in administration." The objection to health insurance is not on general principles but on account of omission of provisions for protecting medical labor; in other words of exploiting one form of labor for the benefit of

another. Complaints of overwork and underpay from the British and German medical professions have been numerous and are apparently well grounded. The British Medical Profession, so far as it represents those especially interested, does not approve health insurance as it is administered. The American profession is divided on the matter but pretty well united on the contention that insurance should deal justly with all forms of labor, as well as with other interested parties, that it should not apply to the well-to-do simply because their work is classified as labor, that the medical profession should be adequately represented on all boards of control and that the work should be adequately compensated.

Mayo Foundation Experiments on Animals. A press story has been current that the Health Officer of St. Paul has refused to surrender dogs from the city pound to this institution on the ground that they must be humanely killed and the inference has been drawn, in some cases that the Health Officer, Dr. Justus Ohage, was an antivivisectionist, in others that the experiments were of a cruel nature. An inquiry directed to Dr. Ohage shows the exact status of the question: The city Charter of St. Paul provides explicitly that unmuzzled and unlicensed dogs must be killed promptly and by the Pound Master.

The Moratorium. B. R. Denny Chairman of the Physicians' Lease Committee of the Chicago Rotary Club announces that the wide publicity given the subject in medical journals has aided the successful prosecution of the work. Senator Chamberlin has introduced a bill, No. 2859, providing for a moratorium in the case of soldiers and sailors, and applying to leases, mortgages and life insurance. A moratorium is a two-edged sword and should be restricted so as to be just to both parties concerned. The medical profession well knows that there are numerous dead beats, disposed to take advantage of any technicality to defraud a creditor. Reasonable delay in the matter of rents, interest, premiums, etc., and prevention of sudden eviction, foreclosure and removal of insurance protection should, of course, be given those in military service. The indefinite free occupancy of premises as tenants or nominal owners may jeopardize the rights of others and diminish the potential taxing power of cities and states or else lead to ultimate confiscation of property. In many instances, this damage will be done to men themselves in military service. The only fair way to deal with the matter is to rebate taxes to the extent of actual losses by the moratorium on rents and interest, thus charging a legitimate

public loss for military purposes to the community instead of to those who happen to have invested in certain forms of property. Unpaid premiums should of course, be deducted from insurance. Any moratorium law should also be executed with due regard to actual conditions so as to avoid suffering but not abet a dishonest person, even if patriotic.

The Hahnemann Hospital of Rochester opened Diagnostic and Research Laboratories, including general pathology and bacteriology, chemistry, Roentgenology and dental research, Nov. 1. A complete hospital unit for the study and treatment of diseases of metabolism is, at the same time, established, under the direction of Dr. John R. Williams. This consists of a group of private rooms and private wards, a diet kitchen and laboratories. Clinics on kidney disease will be held Tuesdays, and on diabetes on Fridays, 3-4 p. m.

Meeting the Demand for Medical Officers. The Regular Army and the National Guard have about 300,000 enlisted men each, requiring, according to regulations, 7 medical officers per 1000, total 4,200. The former has about 800, the latter about 1200, balance required 2,200. The first draft of the National Army—500,000—will require 3500 more medical officers. Total required from Medical Reserve Corps: 5,700. Total available (commissions accepted) Sept. 17: 11,156.

It should be considered, however, that the full demands of the army are 10 medical officers per 1,000, to include those at base hospitals—3,300 more. This requirement is largely met by the Red Cross. It will be seen that the volunteer system secured, shortly in advance of the assembling of the first draft, just about enough physicians to supplement the needs of the Regular Army, and the National Guard, to provide for the first two draft contingents and to leave enough over to allow a liberal margin for supplementing the Red Cross at base hospitals. This speaks well for the profession but the volunteering should continue, to provide an adequate reserve for the future.

There are two other important factors to consider: It is more than likely that the U. S. will have to provide medical men for the Allies and a liberal allowance must be made for replenishing the quotas mentioned. This last statement does not mean that a large percentage of medical officers will be killed or permanently disabled by war but the normal death rate will be close to 2% per annum, without any military risk at all; the radical change of duties and mode of living will undoubtedly reveal a far larger proportion of those unfit for military service for physical reasons, incapacity for dis-

cipline, etc., than among men selected a few at a time and trained for many years for the regular service. It is probably a conservative estimate that 5% per annum will be required simply to keep the numbers full for the above mentioned branches of the army, even if we disregard entirely the question of strictly military risk.

There is one more point that should be emphasized—and we emphasize it especially because we have presented some simple arithmetical calculations which might be interpreted to mean that the medical profession has done its entire duty and can now relax its efforts. The Surgeon General, unquestionably with the approval of other representatives of the army, including the chief executive of the nation, has repeatedly announced the need of a Medical Reserve Corps of at least 20,000. The medical profession should not stop short of this number. It should regard the preceding arithmetical calculations as of purely academic interest, satisfying for the time being only. It should not question whether the apparent discrepancy means an excessive war risk, or whether the ultimate intention is a far greater army than has yet been announced, or whether the needs of our Allies are greater than we imagine, or whether a wide margin of safety is all that is wanted. The medical profession is composed of a class of men who should lead in the comprehension of what war means and who should realize, not only in the intellectual sense but in the literal, practical sense that the best way to preserve liberty in a free country is to obey the proper authorities, promptly and without question, in the present emergency. We do not oppose the draft system for the medical profession but we trust that the actual necessity of a draft as a means of securing the desired number of medical officers will be anticipated by an ample number of volunteers.

“Command” in the Medical Dept. of the Army. Some months ago, we called attention to the fact that the medical department of the army was very far from being a bureau and that it was second in numbers only to the quartermaster's department. It is now, or will be as soon as the enlistments automatically provided are completed, the largest staff department in the army. With the Regular Army, National Guard and first draft of the National Army mobilized (Total about 1,100,000) the Surgeon-General will exercise whatever is the proper technical substitute for “command” over 11,000 commissioned medical officers, 1,100 dental officers, not to mention a considerable number of special appointees, 55,000 enlisted men and a considerable

number of female nurses. The Surgeon-General, as a well merited recognition of personal services, at present ranks as major general but the office itself carries the rank of a brigadier general. A major general of the line (according to the latest available statement) exercises command over a division of about 27,000 men, including somewhere in the neighborhood of 1,000 officers. There certainly is need of revising the matter of rank for the medical department in accordance with actual facts.

Old Age and Dependency. A statement has been going the rounds of various journals, that of 100 healthy men at 25, 36 will be dead at 65 and of the remaining 64, 1 will be rich, 4 wealthy, 5 supporting themselves by work and 54 dependent on private or public charity. According to the U. S. Life tables, about 47 will be dead and 53 will be alive at 65 and these numbers are changed by only about 1, if we restrict the term healthy to those alive and 25 who survive to the age of 30. The economic status of the elderly is too important sociologically to be rated according to statistics which are, at the outset, so inaccurate. We know of no statistics that are reliable upon which the economic condition of elderly persons can be based but we are very certain that half of the non-dependent men of 65 are neither very rich nor wealthy. On the other hand, we are equally certain that there are not over 5 dependent men of 65 for every one who is earning a living or living on his own savings. Now that the subject has been broached, will not someone furnish an accurate statement of facts?

The Official Bulletin (the news (?) paper published by the U. S. Government) estimates that there are 1200 animals at each cantonment, producing 120 tons of manure a day. Either the animals have polychezia or there are a good many more animals at a cantonment, the latter being more probable as the animals for an infantry regiment on the new basis of 3,755 officers and men, number 399 according to another issue of the same Bulletin. At any rate, the sales of manure for 11 cantonments are said to be at the rate of \$240,000 a year. Experiments at Chillicothe show that the garbage from 10-15 men will support one pig and it is estimated that 13 cantonments will yield nearly 19,000,000 pounds of pork which is worth about double what has been obtained from the direct sale of garbage, at a low price per pound. Garbage incineration, on the other hand would cost about \$700,000 for installation and about \$600,000 per year for operation.

Increase of Male Births in England and Wales. For the year July 1, 1914-June 30, 1915, ratio of boys to girls, 1040:1000. Quarter ending with March 1915, 1032:1000; quarter ending with Dec. 1915, 1044:1000; quarter ending with March 1916, 1050:1000; June, 1051:1000; Sept. 1045:1000; Dec. 1916, 1050:1000. Year July 1, 1915-June 30, 1916, 1047:1000. This is the highest ratio of boys to girls recorded. We understand that German statistics have shown an even greater increase of male births so that the old notion that war tended to compensate for losses in the male population, by the preponderance of male births, has received considerable support.

Liberty. Captain Max V. Thierichsen, formerly commander of the S. S. Prinz Eitel Friedrich has been convicted of violation of the Mann law, acquitted of smuggling for taking several chronometers from the ship to land, also charged with sending improper matter through the mail, to another woman. He is probably convinced of our insincerity in waging a war for liberty. Whether the first offense was literally white slavery or voluntary immorality, does not appear. We disapproved the Mann act, as far as its general interpretation is concerned, at the outset, not because we are in league with vice but because of the obvious tendency to develop blackmailing, as has since been shown to have actually occurred, and because we feel that great reluctance should be shown by legislators to curtail personal liberty except when there is a very direct involvement of the rights and safety of others. Since the law has been construed as going far from the regulation of White Slavery, it is pertinent to inquire why it has been interpreted as applying only to one sex in regard to immorality, especially as its application to both would automatically eliminate much of the trouble with blackmail. There is a far broader significance to the general conception of Liberty: In any civilized community, especially if a fair degree of density of population exists, the ordinary doings of individuals must be regulated, for mutual safety, convenience and efficiency, in about the same ways and to about the same degree, whatever the form of government.

Civil Service Positions. Almost every month, we receive notices of state and national vacancies, too late so that they can be published in time for examination. Many of these are highly desirable and carry adequate salaries. Others are especially available for men desiring positions for research or experience and afford at least temporary support. Generally speaking these positions are numerous and more de-

sirable than formerly. We would advise anyone who is on the look-out for such a position to telephone us so that we can give personal notice when the announcements are received too late for publication.

Expenses of Medical Officers. The statement is still going the rounds of the medical press that physicians entering the Medical Reserve can live on \$25 a month and send the rest of their salary to their families. The facts are about as follows: Mess expenses at training camps vary from \$5 to \$10 a week. Some messes have gone to considerable extra expense for tableware. It is altogether likely that, for service abroad, food will be found nearly or quite as expensive under war conditions as in this country, possibly more so. There will be the temptation, either to relieve monotony or to keep up with the crowd, to indulge in considerable extravagance for meals, wherever the officer is located. The entire necessary outfit of clothing, aside from underwear which it is presumed the medical officer already has, but including shoes, rubber boots, slicker, overcoat, cotton and wool uniform, flannel shirts and insignia can be got through the quartermaster and reasonable dealers for a total of about \$60. The same outfit, secured from fancy tailors and dealers in military supplies, and selecting high-priced materials, may very easily cost ten times as much. A judicious selection of certain goods from the quartermaster and recourse to good but moderate priced tailors, according as the garments are intended for rough use or dress, will give a very satisfactory equipment for \$150, possibly \$100. The necessary expense for blankets, cot, etc., need not exceed \$15, and it is doubtful whether medical reserve officers will be required to have these items until they are ordered to camps or to actual service where they can be obtained from the quartermaster. The long list of items more or less required, such as watch, compass, knife, fountain pen, memorandum books as well as trunks and suit cases, stationery, etc., are such as most men already possess. Replacement of equipment will depend largely on unforeseen conditions and the personal equation. We understand that one of our national guard officers (not in the medical corps) has bought five expensive uniforms this summer and, on the other hand, others have apparently not had to replace their uniforms at all. As nearly as we can solve the problem, the personal expenses of the reserve officer when called into more or less active service, will be about what they are at home, less such obviously dispensable things as automobiles, with recreation and food plus or minus according to relative degrees of indulgence at home and in

camp or the field. But it is absurd to tell him that he can live on \$25 a month and he will have to economize closely to live on \$50 a month.

Military Discipline and the Medical Reserve Officer. Some civilian physicians have expressed the fear that military discipline will prove disastrous to their personal comfort and even render service impossible by subjecting them to punishment or actual discharge for errors innocently perpetrated. From regular army officers, members of the national guard who have seen service in the Spanish war or recently on the border and various other sources, it appears that there is a general disposition to overlook technicalities in dealing with inexperienced men and that no civilian of good sense need fear on this score. The medical reserve officer will be mainly under the supervision of his professional confreres and ultimately the Surgeon-General. Recently, we heard a little anecdote that has a good deal of significance. A young physician who served on the Isthmus under (then) Colonel Gorgas said that when he had been on duty a week and was realizing his unfamiliarity with the work and his general lack of importance and wondering whether he could get along in the service, he met and saluted the Colonel and was pleasantly surprised not only at the courteous recognition of his salute but at being called by name. Toward the completion of his service, the same superior showed the same personal interest by notifying him of an opportunity to return to the states as ship surgeon to San Francisco. Military discipline is necessarily strict and requires some readjustment of civilian habits of intercourse but the reserve officer may feel confident that he is in the hands of men who will not unnecessarily and arbitrarily emphasize this point but will look after his best interests so far as possible.

Automobile Upkeep in Europe. The principal practical objection to life in the U. S. is the enormous prices in comparison with normal European standards. Even things that are inevitably higher wholesale are usually considerably cheaper retail. Under war conditions, the following prices are said to be current: Tires, \$90 in Great Britain and France, \$100 in Russia and Italy, \$125 in Spain, \$350 in Holland, \$320 in Denmark, \$460 in Norway, \$550 in Sweden. It is said that tires are absolutely unobtainable in Germany—except rope substitutes and probably a few for the Emperor. Gasoline is 95 cents a gallon in Great Britain, ranges from \$1 to \$1.75 in the allied and neutral countries, and is held at \$6 in Austria and Germany.

Chamberlain Bill for Universal Military Training. The Clinical Congress of Surgeons and State Committees of the Medical Section, Council of National Defense, at meetings in Chicago late in October, adopted resolutions favoring this bill . . . At least six months of intensive military training of all young men in their nineteenth year, to become operative as soon as the army cantonments are available, also recommending physical training in schools.

Niagara Falls Memorial Hospital. The Louise Section was opened November 11, two large wings having been added at a cost of eighteen thousand.

Relative Value of Flour and Potatoes. We estimate on a caloric basis that an economic balance is struck when the price of an eighth barrel sack of flour is the same as of a bushel of potatoes. This does not allow for the higher protein content of flour.

Pneumonia. The Metropolitan Life Insurance Co., reports 38,000 deaths among industrial policy holders in the last six years. It is claimed that lobar pneumonia causes more deaths than any other infectious disease and that it should be quarantined against.

U. S. Medical Forces Attached to French and British. November 8, there were 870 Medical Officers and 470 nurses serving with British and 40 ambulance sections of 46 officers and men each with French troops. 120 more ambulance sections will be formed and trained at Allentown, Pa., for service with the French Army.

Railway Casualties. 1916. The Interstate Commerce Commission reports 206,723 accidents including 10,001 deaths. 129,740 casualties including 525 deaths were not directly due to trains. Of the total casualties 176,923 were employees; 8,008 passengers; 11,791 other persons including trespassers. The deaths were respectively 2,941; 291; and 6769.

War Losses. Early in the war, we expressed the opinion that the deaths were being exaggerated, that anything approaching male depopulation of any country was not to be expected, and that the prevalent statements as to the excessive proportion of fatal wounds, based on the use of high explosives and massive projectiles and the relatively greater exposure of the head in trench warfare, should be seriously questioned. The most accurate statistics for the first three

years of the war just about equaled the killing on paper, published May 31, 1915. Military authorities now agree in placing the ratio of killed (including delayed fatal results of wounds) to total casualties at 20%, the standard rate for most modern wars. The French fatalities have ranged from 5.41% of the total mobilized French forces for the "period" of the battles of Charleroi and the Marne, down to about 1.1% per annum or to 1.28% for total losses in killed, wounded and prisoners for the last six months of 1916. Even early in the war, the results of wounds were highly favorable: for the French army, early in the war, 54.5% returned to duty within a short time, 24.5% returned to duty after convalescence at home, 17% still under treatment with expectation of complete recovery, 1.5% recovered unfit for further duty, 2.5% died. Still better results are said to have been achieved later and the German reports are equally favorable. These wonderful results as compared, for instance, with those of the Civil War, are due mainly to the practical elimination of tetanus, septicaemia and intercurrent infections, as typhoid, and the restriction of amputations to the severest mutilations. While alarming and probably exaggerated reports of prevalence of tuberculosis and syphilis are prevalent, the ordinary camp diseases have been almost entirely eliminated and the statement has been made, especially for the British troops, that deaths from sickness are less than in civil life for a comparable young male population. The killed and fatally wounded of the Civil War represented an annual death rate of almost exactly the same percentage as given above (1.1%). The Civil War military casualties were really far greater, proportionately to the troops actually under arms at any given period, and still greater on the basis of actual combatancy, although it is practically impossible to reduce this statement to accurate figures on account of the vastly different conditions, especially as to continuous fighting. The deaths from disease for the Civil War were almost double the military fatalities and, including accidental deaths and those of prisoners, the direct military fatalities were less than a third of the total deaths. The total losses, killed, died, wounded, prisoners, for the Civil War amounted to about 8% per annum, based on the ultimate total number of troops raised. Those for France amount to about 2.56% per annum, based on the troops mobilized at present.

These statements are made with the qualification that the present statistics may be incorrect or stated in such a way as to cause false inferences. But, so far as the premises are reliable, the conclusion seems to be warranted that the aver-

age risk of death from missiles and other means of attack, is about the same as for the Civil War, in spite of the prospect of more continued actual combatancy; that the chances of recovery from wounds is far greater, either as regards life or restoration to health; that the risk of death due to disease, etc., is practically the same as in civil life, perhaps less; and that the risk of any military unpleasantness, death from missiles or disease, wounding or capture, is about a third of that encountered during the Civil War.

Meaning of the Word "Reserve." We understand that some reserve officers have insisted on immediate service of a definite kind and, on the other hand, that others have insisted that they shall be kept permanently in reserve. The latter remind us of the man who proposed to a girl that she might add a tally to her list of rejections, but with the stipulation that there must be no question but that she would refuse him. A reserve of medical officers does not differ essentially from one of any other kind of military forces. It is equally worthless if it must be prematurely sent into action, or if it cannot be sent into action at all.

Fort Porter, Buffalo, has been selected by the Army as General Hospital No. 4, under the command of Major Thomas D. Woodson. It will be used at first as a training depot for base hospitals. At date of writing (Nov. 17) Base Hospital No. 23 in command of Major Guy V. Rukke is waiting travel orders. Base Hospital No. 10 of New York City and another are also mobilized here for the present.

SOCIETY MEETINGS

Brief reports and announcements of meetings of societies of Western New York, and those of general scope, are requested from Secretaries. Copy should be on hand the fifteenth of the month. Full transactions will be published at cost of composition.

DOCTOR: Is your Society properly represented here? If not, please bring our standing announcement to the attention of the members.

The Buffalo Academy of Medicine, Section of Pathology, October 24. Program: Organization of Work of the Laboratories of the British Medical Service in the Field, Col. George G. Nasmyth, C. A. M. S. of Toronto.

Section of Surgery, November 7. Program: Some Complications and Incorrect Diagnoses in Urological Surgery, Dr. Oswald S. Lowsley, New York; Some Practical Points about Renal Infection.

Section of Medicine, November 14. Program: Laboratory Diagnosis and Intravenous Therapy in Typhoid Fever, Dr. Barton F. Hauenstein; Studies of Salt in Nephritis, Dr. Byron D. Bowen.

Rochester Academy of Medicine. Section III, November 14. Program: The Prenatal care of Pregnant Women, Dr. J. T. Beirmeister.

Elmira Academy of Medicine. November 7. Program: The Surgeon's Attitude Toward Painful Lumps in Breast, Dr. A. W. Booth; Chronic Nephritis, Dr. Maurice Packard, New York.

OUR CONTEMPORARIES

Paediatrics is merged with the Medical Review of Reviews, beginning with the November issue. With the January issue of the combined journal, a special department of paediatrics will be established.

The Homoeopathic Envoy, Sept., quotes from a Toronto paper, to the effect that a Toronto nurse awaiting orders to go overseas, died at the Buffalo General Hospital, as the result of "antitoxin typhoid poisoning" from a prophylactic injection. The facts, as stated by Major N. G. Russell, are that this nurse, along with other members of Base Hospital Unit No. 23, received the regular prophylactic injection against typhoid, and paratyphoid A and B; that she had had a chronic colitis subsequently identified by the agglutination test as due to the Kruse bacillus; that the colitis did become worse after the prophylactic injection and resulted fatally; that there was nothing to indicate that the prophylactic injection was even indirectly the cause of death and that no other untoward results occurred among the considerable number vaccinated. (Note: A number of analogous cases, of the lighting up of one infection after an accidental infection with a different microorganism, or after some form of deliberate prophylactic vaccination or therapeutic use of a germ product, have been reported, especially in foreign journals. It is perfectly possible that there is a cause and effect relation. The very small proportion of such unfortunate cases in the total number of heterologous infections or deliberate intro-

duction of some kind of germ product renders it doubtful whether these cases are or are not coincidences; whether if not coincidences, they represent a definite reaction between two heterologous specific germ products and autochthonous products of metabolism or cellular life; or whether they are instances of a general anaphylactic reaction, independent of either the existing infection or the germ products recently introduced; whether in any case, further research will enable us to determine when and where a prophylactic or therapeutic use of germ products is dangerous. The practical point is that all authorities who have investigated the problem agree that certain methods of biologic prophylaxis, as antivariolar and typhoid and paratyphoid vaccination, diphtheritic anti-toxin, etc., are of the utmost value in the vast majority of instances. These claims have been supported by statistics of very large numbers of cases, the present war having, in particular, supported the experience of the Boer War and the naval and military experience of various armies in time of peace in favor of the anti-typhoid prophylaxis. Even if such cases as the one cited are directly due to prophylactic injections, they are far outbalanced by the enormous saving of life which, at least under existing war conditions, can not be ascribed to sanitary prophylaxis).

PERSONAL

Announcement of removal, travel, and other matters of interest are requested. Please report errors in the listing of any physician in the State and other directories, that we may co-operate with the State Society in securing a correct list.

Dr. Frank B. Storer of Holley is spending the winter in California.

Drs. E. P. H. Griswold and E. O. Bingham of Niagara Falls have been appointed to the municipal civil service commission, vice Drs. F. N. C. Jerault and R. S. Barry, now in military service.

Dr. Wm. B. Johnston of Ellicottville spent some time hunting in the Adirondacks late in October and early in November.

Dr. Ira W. Livermore of Gowanda was home from Camp Bartlett, Westfield, Mass., early in November.

Dr. Lee Masten Francis of Buffalo was elected Secretary of the American Academy of Ophthalmology and Oto-Laryngology.

In our personal notice in the November issue, of the removal of the office of Dr. John D. Flagg of Buffalo to 473

Virginia St., it was incorrectly stated that his practice was limited to Laryngology, Ophthalmology was meant.

Dr. Edgar R. McGuire of Buffalo announces the removal of his office and residence to 622 Delaware Ave.

Dr. Joseph S. Lewis of Buffalo was injured in a collision with a trolley November 14. He sustained a fracture of the clavicle and was unconscious for a short time. He was taken to the Homoeopathic Hospital. At last account he was progressing favorably.

Dr. Stephen Y. Howell is spending a short time at the Mayo Clinic, Rochester, Minn.

The Supervisors of Cattaraugus Co. at their meeting of November 14, increased the salary of the jail physician from \$125 to \$300. Dr. M. L. Hillsman is the present incumbent.

MILITARY PERSONALS

Dr. R. C. Miller of Buffalo has been appointed Assistant Surgeon U. S. Naval Reserve and has been assigned to duty in the Recruiting Station in Buffalo.

Dr. Regina Flood-Keyes of Buffalo left about November first for Paris, her ultimate destination being Serbia where she will serve as Surgeon in the American Red Cross.

Dr. Clarence H. Mackay of Lancaster, returned to his studies in Boston Oct. 27, after a week's leave at home.

Dr. Leo C. Reimann of Franklinville went to Washington about Nov. 1, for a course in military medicine, preparatory to service abroad.

Lt. J. Arthur Elson of Albion has been ordered to duty at Ft. Riley, Kas.

Lt. Ralph E. Brodie of Albion who has been at the Yaphank training camp, expects to be ordered to France soon.

Major John W. Meehan of the regular Medical Corps, who has been stationed at Syracuse, was ordered to Ft. Sheridan, Ill., Nov. 1, to organize a hospital train.

Lieut. Charles W. Strowger of Pittsford writes from France Oct. 8. He tells of traveling on the military tickets which are one quarter the regular fare, (about $\frac{1}{2}$ cent a mile) of-ficers traveling first class without extra expense.

Major Charles W. Hennington of Rochester, our associate editor, wrote last month from Boston that he was in a class of twenty, studying military orthopaedics with Lovett, Mark Rogers and others. The course is directed largely by the experience of Robert Jones of Liverpool with British Troops.

Capt. Charles H. Erway of Elmira has been ordered to Camp Hancock, Augusta, Ga., for the special examination of the command for tuberculosis.

Lt. Francis A. Georger of Buffalo arrived in France in November.

Capt. Kent E. Williams of Rome has been ordered to Camp Funston, Fort Riley, Kansas.

Lieuts. Milton G. Burch, Hornell, Clinton E. Goodwin, Weedsport, Lewell T. Genung, Worchester, George H. Shaw, Camillus, have been ordered to Camp Sherman, Chillicothe, Ohio.

Lieut. Arthur B. Graves, Perrysburg, has been ordered to Camp Wheeler, Macon, Ga.

Lieut. Daniel E. L. Stedem, Buffalo, has been ordered to Fort Oglethorpe for instruction.

To Army School, Lieut. Leo E. Reimann, Buffalo.

To Camp Funston, Fort Riley, Kan., Major Martin B. Tinker, Ithaca.

To Camp Grant, Rockford, Ill., Lieuts. Minor McDaniels, Ithaca; Allen N. Moore, Lockport; Otto J. von Renner, Buffalo; John L. Bishop, Niagara Falls.

To Camp Lee, Petersburg, Va., Lieut. Forest R. Mildrew, Auburn.

To Camp McClellan, Annistan, Ala., Lieut. Frederick C. Devendorf, Utica.

To Camp Meade, Annapolis Junction, Md., Lieut. John R. Booth, Rochester.

To Camp Devens, Ayer, Mass., Lieuts. Francis J. Talbot, Niagara Falls; Robert Knight, Seneca Falls; Benjamin F. Colegrove, Van Etten; James B. Foster, Webster.

To Fort Niagara, Major Frederick N. C. Jerauld, Niagara Falls.

To Boston City Hospital, Lieuts. Arthur H. Nysten, Brooklyn; Edmund B. Spaeth, Elmira.

To Camp Custer, Battle Creek, Mich., Lieut. Roswell F. Foster, Westfield.

To Camp Greenleaf, Fort Oglethorp, Lieuts. Robert P. Dobbie, Buffalo; Wm. W. Carleston, Waterloo.

To Camp Shelby, Hattiesburg, Miss., Capt. Clarence E. Coon, Syracuse.

To Fort Benjamin Harrison, Ind., Lieut. Adelbert C. Abbott, Syracuse.

To Fort Leavenworth, Kan., Lieut. Noah P. Norman, Watkins.

To Mineola, L. I., Aviation Section, Lieut. Scott R. Fisher, Syracuse.

To Syracuse Re-Organization Camp, Lieut. Howard C. Fairbanks, Tonawanda.

Camp Sheridan, Montgomery, Ala., Capt. A. L. Benedict, Buffalo, Gastro-enterologist, 37th Division.

To Kelly Field, Signal Corps, Aviation School, San Antonio, Texas, Lieuts. Joseph Brumberg and Milton H. Goldberg, Buffalo.

Camp Custer, Battle Creek, Mich., Capt. George F. Mills, Oneida.

Camp Devens, Ayer, Mass., Lieuts. Charles E. Congdon, Buffalo; Adelbert C. Abbott, Syracuse.

Camp Greenleaf, Fort Oglethorpe, Lieut. Warren C. Fargo, Warsaw.

Camp Joseph E. Johnston, Jacksonville, Fla., Lieut. Macy L. Lerner, Rochester.

Camp Pike, Little Rock, Ark., Lieut. Robert R. McCully, Auburn.

Camp Upton, Yaphank, L. I. N. Y., Lieut. Albert C. Durand, Ithaca.

Chicago, Ill., Neurological School, Major Charles Hennington.

Fort Oglethorpe, Lieut. Harold B. Johnson, Buffalo.

Fort Sill, Okla., Lieut. Edwin S. Ingersoll, Rochester.

Langley Field, Hampton, Va., Edward L. Hezeltune, Jamestown.

New York City, Bellevue Hospital, Capt. Chas. W. Hoyt, Rochester; Lieut. Bernard S. Strait, Penn Yan.

Walter Reed General Hospital, Takoma Park, D. C., Capts. Joseph R. Culkin, Rochester; Stephen A. Mahady, Utica.

Honorably discharged on account of physical disqualification, Lieut. John W. Munro, Rochester.

Lieut. A. E. McCarthy has been transferred from Camp Benj. Harrison to Camp Taylor, Louisville, Ky. Special work Tuberculosis.

OBITUARY

Readers are requested to report promptly the death of all physicians in Western New York, or former residents of this region, or graduates of any medical school in Western New York, and to notify the families of the deceased of our desire to publish adequate Obituary notices.

Dr. James G. A. Davies, Druidic of Me., 1882, of Dalton, N. Y., is reported dead by the P. O. We have seen no notice of his death since his name was listed in the 1916 edition of the State Directory and have been unable to elicit information by correspondence. Will any of our readers confirm the report or furnish details?

Dr. Harold Havelock Kynett, U. of P., 1886, died in Philadelphia, Oct. 1, aged 55. For several years, he was editor in

chief of the Medical and Surgical Reporter, the editor of the Buffalo Medical Journal then being on the Associate Staff of the Reporter. We pay due tribute to the many qualities and professional and editorial ability of Dr. Kynett. Though not himself interested in that line of practice, the American Gastro-enterologic Assn. owes him a debt of gratitude for allowing the preliminary call for its organization meeting to be published in the Reporter and for offering the hospitality of its officers for the meeting, although for various reasons, this offer was not formally accepted. Unfortunately, our personal acquaintance with Dr. Kynett lapsed, through the unaccountable misunderstanding that he died several years ago.

Dr. Thomas B. Russell, Vt. 1851, the oldest practicing physician in Wis. died at Oshkosh, Oct. 5, aged 90. He was Surgeon of the 1st Wis. Cavalry in the Civil War.

Dr. C. Schuhart, P. & S., Baltimore, 1881, died at his home in Rochester, Sept. 23, aged 62.

Dr. Wm. A. White, (not listed in State Directory), died in Phelps, N. Y., Oct. 14, aged 44.

Dr. Alfred M. Gamman, N. Y. Homoeopathic 1866, of Corning, N. Y., died in Kansas City, Oct. 5, aged 65, (sic, Jour. A. M. A., obviously incompatible with date of graduation), of nephritis. He was a pioneer oil man of Tulsa, Ok.

Dr. Gilbert Knapp Ellis, Niagara 1887, died Sept. 19, of diabetes, aged 60, at his home in South Sodus, (Valois) N. Y.

Dr. Herbert M. Burritt, Buffalo 1901, of Holton, Monroe Co., N. Y., died at Clarkson, N. Y., Oct. 12, aged 45.

Dr. Charles Forbes, P. & S. (Columbia) 1871, of Rochester, died in the Rochester General Hospital, Oct. 2, aged 73. He was a scientist, especially interested in electricity and photography. To him is due the individual communion cup and several minor medical appliances.

Dr. Chauncey W. Chidester, P. & S. Chicago, 1886, died at his home in Newark Valley, Aug. 16, of arterio-sclerosis, aged 70. He was formerly coroner of Tioga Co.

Dr. Samuel Ensign, Geneva Medical College, died at his home in Arborville, Neb., Aug. 19, of cerebral haemorrhage, aged 98. He was for many years a druggist.

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Number 6

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BUFFALO MEDICAL JOURNAL

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ORIGINAL ARTICLES

The right is reserved to decline papers not dealing with practical medical and surgical subjects, and such as might offend or fail to interest readers. Contributors are solely responsible for opinions, methods of expression and revision of proof.

Radium as a Therapeutic Agent.

By JOHN M. LEE, M. D., Rochester, N. Y.

When surgeons were convinced many years ago that inflammation of the bowels and peritonitis caused thousands of deaths preventable by timely removal of the appendix, you remember how bitterly that operation was opposed for a number of years.

In the early days of abdominal section for the cure of ovarian tumor, a prominent French surgeon in referring to some of Dr. McDowell's reports says, "In spite of all that has been written respecting the cruel operation, we entirely disbelieve that it ever has been or ever will be performed with success." The French surgeon but expressed the prevailing sentiment of that time concerning Dr. McDowell's operation which has added ten years to the life of women. This opposition has been the rule with most advancements, whether among the laymen or the profession. In medicine and surgery, there have been gallant leaders who attacked what later even they acknowledged to be the best method of treatment.

The effects of radium upon such deadly disease as cancer are so startling that it is no wonder that men who have not had the opportunity to investigate the subject believe that it is another of the numerous fake cures for the red plague, and that it is only a kindness to warn people against submission of their cases to these over-enthusiastic, if not misguided doctors.

Comparatively, it is only a few years since the discovery of radium; its use in surgery is still more recent; and why should it not also receive persecution and condemnation?

This great advancement in cancer therapy ranks with anaesthesia antiseptics or any other of the great epoch making developments in surgery, and, like these it has had its months and years of earnest discussion. During this process of winnowing out the chaff, it is no wonder that the use of the agent was largely laid aside for a time because the methods of application were not sufficiently well understood to enable physicians to secure the desired results. Then, again, many of the specimens employed by the physicians were not up to the present standard. In those days, there was no standard, and in some instances where it was supposed that a goodly amount of radium was purchased, only a few milligrams were actually obtained. Very likely the instruments for weighing were imperfect and the mistakes were honest ones.

Nevertheless, the effect on surgical practice was uncertain, inefficient, and, of course, failed to produce the results expected because there wasn't sufficient dosage of the precious metal to effect cures. The writer has been told by one of the authorities in an American Company, that in weighing up a supposed fifty milligram tube, they found that there was less than five milligrams of the pure radium element contained in the receptacle. In another instance as the part of an estate of a physician which went into the hands of a receiver a twenty-five milligram tube of radium had to be measured and it yielded less than a single milligram of the radium element. The doctors, who made the purchases in these particular instances, not only lost several thousand dollars in actual cash, but, what was of even greater value to them, their reputations. These are some of the conditions which brought radium into disrepute in America. Up to this time, the people thought well of it, and many physicians caused their patients to rent tubes of the metal for use in malignant diseases. The writer recalls one particular case where a gentleman had cancer of the tongue; he paid \$250 rental for the use of a tube for a week and carried it in his vest pocket when he did not hold it upon his tongue, which he was advised to do for only a few minutes at a time. There was no perceptible effect upon the disease at the end of the week from application of the radium and the carrying of the supposed metal in the pocket most of the time had no effect upon the skin, or tissues adjacent to the radium. This very fact that he could keep it in his vest pocket most of the time without any reaction of the skin underneath the pocket is proof conclusive that he really had but little, if any, radium in the tube. There were numerous cases of rental of radium over the country and the results were universally bad, and

the explanation is the deception as to the amount of radium used. There need be no doubt as to the amount of element contained in any applicator or tube today as the contents of the apparatus may be checked up by the Bureau of Standards at Washington, D. C.

Another cause was the purchase and use of radio active materials which contained no radium element and their activity lasted only a few days; frequently the radium emanation was discharged before the appliances were received by the physicians and of course they were utterly useless.

Still another source of dissatisfaction was the treatment of patients who were apparently incurable, consequently frequent failures occurred. This mistake, if it may be called such, is one to which nearly every surgeon who uses the element subjects himself. It may be said even today that many of us take patients whose cases are forbidding; still the pain from which they suffer, the hemorrhages, discharges and the unpleasant odors, may all disappear under its influence and the patients brought into a more comfortable condition. In fact, those that seemed entirely beyond the reach of remedial agency yield promptly to this remedy. While a cure is out of the question in many of these cases the relief is such that we feel that there is no other means that can in any way equal the beneficial results secured even in these hopeless cases. As shown by this case (fig 1) of lympho sarcoma of the neck, axilla and extensive edema of the thorax, and loss of the use of the arm, any treatment known to us prior to the introduction of radium would have been utterly useless. Of course opium would have relieved the excruciating pain but the patient would have quickly sunk under the disease and succumbed to its ravages. He received ten thousand six hundred milligram hours radiation from nearly a gram of element which caused the tumor to subside nearly one half in size. The pain was so relieved that it was scarcely noticeable, his appetite and strength returned and the outlook was improved. Two months later, he was given a second massive dose. The growth is still regressing and the patient is quite comfortable. We do not expect the disease will entirely disappear but the results achieved so far are such as to warrant the use of the agent in hopeless cases.

While it is too early to make estimates as to the number and extent of the cases improved, it now looks as though by the judicious use of radium and surgery combined twenty-five or thirty per cent. of the hitherto hopeless cases of

malignant diseases may be clinically cured. Many of these have remained well after four and five years.

To say that we are surprised at the results of this agent is too weak a word, we are amazed; wide sloughing surfaces even including bone and cartilage are cleaned up and the wound brought into a healthy state and healed. Tumors are dissipated, and the comfort and lives of patients are prolonged far beyond a point possible to be secured by any other treatment. Indeed if radium can achieve no greater success than to lessen pain and other conditions attendant upon the disease it would be sufficient accomplishment.

As stated in a previous article, bad technique has been another fruitful cause of failure. We are gradually correcting these imperfections and many others but a glance at the subject will suffice to convince any that it must necessarily take considerable time to accumulate and classify tables of different forms of disease, methods of treatment sufficiently comprehensive to enable investigators to determine just what cases are suitable for the remedy, just what methods of treatment are best calculated to reach the desired results, just what the dosage should be in each form of the disease, and other questions of vital importance which constantly come before the profession.

With the lapse of years better methods have been developed, accurate instruments of measurement have been invented, the indications for the use of the agent have been narrowed down until one need not often disappoint his patients by holding out claims which have not and cannot be verified. Enough progress has been made to enable us to reach promptly many forms of cancer and sarcoma. In some cases of the maladies a single application causes all symptoms and local manifestations to disappear.

The remedy is gaining quite a foothold in diseases which are by no means malignant; such as goitre, birth marks, benign tumors, especially fibroid of the uterus in which field the most flattering results have been obtained. As Dr. Clark, President of the American College of Surgery, said at the meeting of the American Radium Society in New York City last June, "Radium is of especial service in the smaller fibroid tumors where infection of the tumor, the appendages or ovarian growths are not present." In such cases radium is the treatment of choice, but where the conditions just mentioned are present or the growth is very large and extends above the umbilicus, hysterectomy Dr. Clark believes to be the preferable operation.

The radiologist must have sufficient radium for the curative dose in each individual case and a sufficient volume



Squamous Cell Carcinoma of the Tongue—Two applications of 100 mg. radium element, stitched to the tongue and allowed to act twenty-four hours. Several light applications made to tongue later. No recurrence after three years.



Carcinoma of Superior Maxillary and Antrum of Highmore.
Remains perfectly sound after eighteen months.



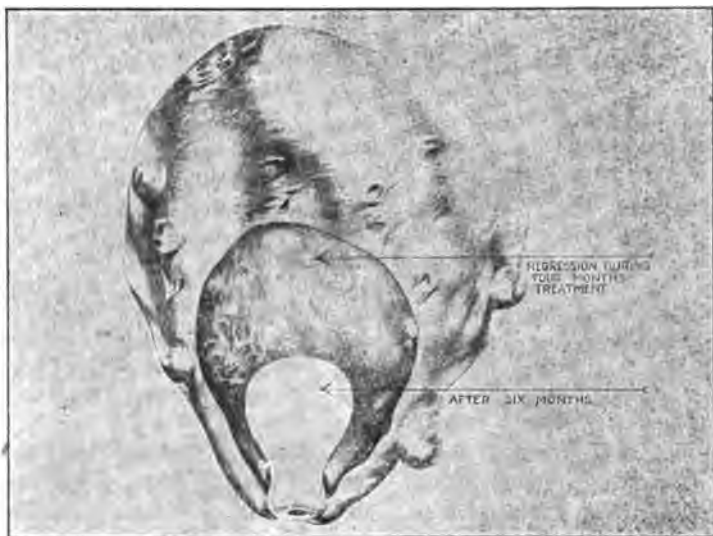
Sarcoma before treatment.

Appearance after treatment with
nearly a gram of radium element,
aggregating 10,600 mg. hours.

Two months later, after 8,800
mg. hours.

to enable him to treat with reasonable promptness the number of patients who apply for relief. In superficial epithelioma and rodent ulcer, twenty-five milligrams of radium element will answer for many cases, but in fibroid tumors from fifty to a hundred milligrams will be required and in Hodgkins disease, large sarcoma and the like, a half gram or even more of the element may be demanded.

Five years ago there were only two hospitals in America where sufficient radium was available for the treatment of cancer. There has been vast expansion in the treatment of disease by radium since that time; we now have a National



Fibroid of the Uterus.

Radium Society of about fifty members scattered over the country who are equipped and competent to treat the class of patients afflicted with the various diseases for which radium has now proven itself to be the best if not the only remedy.

Again, most of the medical societies make provisions for the free interchange of thought and discussion of the radium treatment of disease. The medical literature of the country is becoming rich with articles giving technique, dosage and other valuable information. America has already taken a foremost place in the management of cancer and other diseases by the use of radium therapy; and our physicians and surgeons, as shown by their work, rank with the best in this department of practice.

The Loppered Milk Diet.*

Including References to its Benefits in Post-Operative Disturbances and Metabolic Defectives.

DR. GEO. N. JACK, Buffalo.

(Continued from December issue.)

The seasons of the year in our climate that are most favorable for the unstable blood of the asthmatic, or that possesses more weather blood stabilizing agents, are the spring summer solstice quadrant which extends approximately from May the 5th to Aug. the 11th, and the autumn winter solstice quadrant which extends approximately from Nov. the 6th to Feb. the 4th.

The seasons of the year that are the most unfavorable for the unstable blood of the asthmatic and the summer autumnal coryza victim, or that possess more weather blood disintegrating agents are the summer autumnal equinoctial quadrant which extends approximately from Aug. the 11th to Nov. the 6th, and the winter spring equinoctial quadrant which extends approximately from Feb. the 4th to May the 5th.

The summer autumnal equinoctial quadrant with its chilly, humid heavy dew, foggy, toxic ground gas nights, tends to disintegrate the unstable blood of the asthmatic and coryza subject.

These blood disintegrating summer autumnal nights are generally followed by hot, humid, windless, smoky atmospheric stasis days that cause a dilatation of the capillaries of the mucous membranes of the head, which favors a dumping of the disintegrated blood's waste products, producing the characteristic summer autumnal coryza.

The windless air stasis autumnal days also favor the accumulation of toxic blood disintegrating ground gases.

In some summer autumnal coryza subjects this blood dumping process does not extend in an incapacitating manner beyond the mucous membranes of the head, but not so in the asthmatic.

In the asthmatic the blood dumping process soon extends to the larynx where the ventricular bands are so thickened and hypertrophied by a dilatation of their mucous membrane capillaries and the accumulation of waste fluids from the disintegrating blood in the numerous wide lymph spaces found in them, that they project into the lumen of the larynx far enough to catch sufficient air on expiration to produce a valvular action that nearly closes the air tube. The process

is also aggravated and the ventricular bands pushed farther into the lumen of the larynx by a great engorgement with dead leucocytes of the numerous mucous glands located in the ventricles of the larynx and their ascending pouches. This process nearly closes the common air tube at its laryngeal end, resulting clinically in a severe attack of asthma with a wheeze so loud that it often can be heard clear across the street. The loudness of the wheeze shows that it comes from the larynx and that it could not come from the smaller bronchi way down in the chest.

After the asthmatic recovers from the laryngeal involvement, by resolution and expectoration, the same process rapidly extends to the mucous membranes of the trachea and bronchi, narrowing and obstructing or plugging their lumen, producing attack after attack.

The dyspnoea with each air tube plugging process is aggravated by a dilatation and congestion of the dense capillary net-work of blood vessels found upon the walls of the air cells, thus rendering them erotic, which retards their normal expiratory partial collapse.

This abbreviated review of the pathology and physics of summer autumnal coryza and asthma as I have worked it out in previous papers shows the importance of the selection of a proper diet in these cases.

The prevailing weather conditions during the summer autumnal equinoctial quadrant, together with the gastrointestinal disturbances common to that season of the year, produce more asthma than any other part of the year.

This summer and autumn have been so cold, windy, rainy and cloudy that there have been but comparatively few cases of summer autumnal coryza and asthma. Similar weather conditions prevailed in the summer and autumn of 1915, with a like decrease in the number of cases. The winds blew away the humidity and toxic ground gases and the rains also tended to wash the toxic gases from the atmosphere; and we had but few hot humid days to dilate the capillaries.

As soon as frosty or steady freezing weather sets in, the humidity is frozen up and the capillaries tightened up, which brings relief to the coryza subject and the vigorous asthmatic. The feeble asthmatic is made worse by the frosty air. The blood is driven from the surface capillaries to the deep organs, often so congesting the lungs as to terminate in bronchial pneumonia.

Summer autumnal coryza subjects and asthmatics are very sensitive to all dusts during attacks of coryza or asthma, but during favorable weather or seasons or when they are free

from an attack, they, as a rule, are not affected by dust any more than normal people.

Most autumnal coryza subjects can during favorable weather, or the spring and winter months, work with a grain threshing machine, grain elevator, hay press or a grain mill where they come constantly in contact with air saturated almost to a suffocating point with pollen dust and other dust from every plant that grows without bringing on an attack of coryza or asthma or suffering any more inconvenience than a normal person would.

It would indicate in the case of summer autumnal coryza subjects and asthmatics that can work in pollen dust during favorable seasons without coryza or asthma, that their seasonal trouble is not due to a pollen dust anaphylaxis. Likewise it would indicate in the case of asthmatics that can eat all foods without asthma during favorable seasons that their asthma is not due to a food anaphylaxis.

The thick milk diet tends to add stability to the blood. I have seen people with an unstable hypersusceptible blood that was sensitized to numerous weather and food conditions, go through the blood disintegrating summer and winter equinoctial seasons while on a loppered milk diet without their usual seasonal or weather sickness.

After the blood has disintegrated from any cause, it has its vitality weakened, its metabolism shattered and is still further handicapped with an extraordinary blood dumping process. During this defensive period the blood is in no position to take on any more nourishment than is absolutely needed to maintain a spark of life and keep up the dumping battle and here again the loppered milk diet has often turned the battle tide and declared peace.

In post operative, metabolic or nutritional disturbances immediately following a serious operation where the nutrition of the patient is often a very delicate and most important problem, the loppered milk diet has often produced most gratifying results.

In post operative cases where the nutrition and metabolism are more or less permanently disturbed, as that following, cholecystectomy, gastro-enterostomy, thyroidectomy or ovariectomy, the loppered milk diet has often so successfully corrected the perversion as to permit the formation of fat to cushion in and take the pang and pull from the post operative adhesions. This fact has, I believe, in some cases prevented the development of a post operative wreck.

I now have under my observation four cases of chronic cholangitis and cholecystitis, two of which have probable gall stone complications that have thrived and, up to date,

gone from one to two years without any serious or incapacitating attacks while on the loppered milk diet and indicated medicinal treatment.

All of these four cases up to the time that they commenced treatment, had had frequent and serious attacks of liver and gall bladder troubles.

Three of these four cases were confined in bed from two to three months before they commenced the loppered milk treatment and during these long attacks their liver gall bladder trouble was so serious together with the accompanying nausea, vomiting, chills, fever and emaciation that all operative procedures were postponed.

After partial recovery an operation was performed on one of these cases, a man aged sixty-six who had had periodic biliary attacks since sixteen years of age. We drained the gall bladder but did not find any gall stones.

The other three cases since their recovery from their last severe attacks are doing so nicely on the loppered milk diet in conjunction with indicated medicinal treatment that they have refused any operative interference.

My high blood pressure cases that have tried the loppered milk diet in conjunction with indicated medicinal treatment have obtained some very gratifying results.

I have come to base the prognosis of my functional anaemias and blood impoverishments upon the quantity of loppered milk that a given case will take.

In stomach diseases or gastro-intestinal disturbances there is no other diet that equals the loppered milk diet.

In impotency I have seen the loppered milk diet produce some surprising results, owing to the increased tone and nourishment of the vasomotors and capillaries. One case, a woman ten years married and the mother of four children, was cured of orgasmus impotency by the loppered milk diet, the first case of this character that I had seen cured. Some observers have claimed that about 40% of all women have orgasmus impotency, for which there is no cure, no matter whom they marry, the age at which they marry, nor the number or frequency of their pregnancies.

I have four cases of sugar diabetes that were cured of their emaciation, weakness, thirst, pruritis and general debility; and while they still show sugar in their urine they have led very active lives that required much physical exertion, without a breakdown, for from three to five years.

There is nothing better for kidney disturbances than the loppered milk diet and in many cases I have seen albumen disappear from the urine after a short trial of this diet.

Three cases of functional insanity that were cured under

my observation by the loppered milk diet in conjunction with indicated medicinal treatment and spinal cupping, show that the loppered milk diet has a future in this large class of miserable individuals.

One patient, age seventeen, in charge of an attendant as she had attempted suicide, first consulted me Apr. 7, 1914. She conversed in a crying voice that was interrupted by frequent weeping spells. She had not menstruated for one and one-half years and was so anaemic that her blood penetrated test paper like pale ink; the red cells were granular, scant and 50% disintegrated. She was jaundiced with a large liver, much flatulency and frequent chills, resembling a hemolytic jaundice.

The result of the treatment was encouraging from the start. In seven days she came to the office alone and with a smile. This patient began with three pints of thick milk a day and at the end of four weeks was taking six pints a day, which amount she continued taking daily for two years. During these two years she gained forty pounds in weight. Patient had her first menstrual show Sept. 10th and her first menstruation Oct. 1st, or about six months after commencing treatment or two years after her last menstruation. Menstruation has continued regular and normal since starting and the patient has remained well up to date.

One other patient I have had under observation only since July 5th or about four months but the result is very promising. When I first saw this patient she was so far advanced, so full of delusions, so excitable, unapproachable and apparently unmanageable that I advised her committal and accordingly called Dr. Nairn in consultation who agreed with me.

Before committing her however, at the request of her husband, we decided to try home treatment. Patient was a woman aged forty-nine, menopause age forty-two, never pregnant, weight 153 pounds, urine alkaline, loaded with phosphates, albumen more than a trace, indican blue.

This patient, in charge of an attendant, was put upon the loppered milk diet in conjunction with indicated medicinal treatment and sent out of town for three weeks, returning to Buffalo every week for inspection. After three weeks treatment patient was so much improved that she returned to her own home of which she took full charge.

This patient is still continuing her loppered milk diet, of which she averages about two and a half quarts a day and has continued to improve.

There is no diet for tuberculosis that has given me as satisfactory results as has the loppered milk diet. If my

tubercular patients are taking six pints of milk a day, I assure them that they are on the best diet possible for their condition.

Gastro-intestinal flatulency is rarely met with in patients on the loppered milk diet. The antiseptic action of the lactic acid in the loppered milk prevents intestinal putrefaction, and its resulting toxic gases.

Loppered milk being fermented before it is taken acts as an anti ferment thus preventing the gases arising from intestinal fermentation. Loppered milk owing to its anti ferment and anti putrefactive action tends to prevent or overcome an acidosis which now has come to be recognized as one of the associates of physical degeneration or impending death.

The increased strength or endurance of people on a loppered milk diet is very marked. This one can understand by comparing the food value of milk with other foods. In this connection the Buffalo Sanitary Bulletin of May 31st, 1915, states that "The food value of one quart of milk is equal to either of the following: Three-quarters pound lean beef, two pounds of chicken, four-fifths pound loin of pork, three-fifths pound ham, three pounds fresh cod fish, one pint oysters, eight or nine eggs."

From an economic standpoint loppered milk is the cheapest possible diet one can live on even at eighteen cents per quart.

In about 90% of the cases in which I have prescribed the loppered milk diet, although at the first suggestion many gave a shudder of disgust, they have soon come to take it with a relish and to pronounce it the best thing they eat, the part of their diet that they always take with satisfying comfort and a feeling of immediate invigoration.

Loppered milk when properly prepared from rich, pure, clean, wholesome, raw milk, has a pleasant taste. If loppered milk is used before it has the proper age, it has a disagreeable acid taste. If milk is allowed to lopper in too warm a room or in an enclosed container, as bottles with caps on, it is apt to become lumpy when churned up and to have a rancid disagreeable taste; but when milk is properly loppered and served it constitutes a very palatable dish.

I do not advocate the loppered milk diet as a specific nor as a cure-all, but in conjunction with indicated medicinal or surgical treatment, I have seen it help out.

Malingering by Garlic. Geo. V. Perez, Med. Press, Dec. 20, 1916, states that inunctions are used in Spain to produce fever and that a garlic suppository produces a febrile reaction within 24 hours.

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Control of Food and Other Prices.

The control of food prices is the greatest necessity along the lines of paternal government, especially in war. But, in a complicated civilization, the ultimate and obvious reason is not the correct one for practical logic. In such a civilization, the individual or family, has an income which must be distributed, in dollars and cents, among various necessities and, down to the actual requirements of nutrition, food is, from many aspects, the least necessary. It is easy enough to say that this statement is absurd and to support the objection on physiologic and anthropologic grounds. But, from the standpoint of the typic civilized individual or family, far removed from the direct problem as to whether he shall use his time and strength in catching a rabbit or gathering seeds and berries, or in building a hut or weaving a blanket, or making a fire place, or making beads to decorate himself, with all sorts of necessities, comforts and luxuries equally available providing he has the money to buy them, the hard fact is that he gets less psychic gratification from food than from almost anything else and that, therefore, he is more disposed to scrimp on food than anything else. There are numerous exceptions to support the idea of the prime necessity of food but they are not so much types of modern civilization as survivals of the savage in a civilized population. It must also be remembered that a good deal of extravagance in the way of food is really not so much in the purchase of nutriment as of music, cabaret shows and dancing. Also, it must be remembered that we charge to food a good deal that

is precisely analogous to the time and labor that the savage spent in making beads and that even the savage spent a good deal of his energy on this last and similar desiderata.

The real, practical, present reason for emphasizing control of food prices is that at the lowest wage limit, the individual must spend about half his earnings on table board (which is not so much a tautology as it appears) and the family on food stuffs. Double this actual expense is enough for anyone to spend on food and, however much the actual food expense increases, it very rapidly declines to 10% of the total income for the fairly well-to-do family and to a percentage so small for the rich that no conceivable increase in food prices can affect them appreciably.

Now, while the indirect tax of war will, if not opposed by government paternalism, fall heaviest on the very poor, the direct tax which amounts to about \$110. per capita per annum, according to present estimates, can not be limited to the rich but will apply to a very considerable degree to the fairly well-to-do. Moreover the indirect, economic tax will, relatively, affect this class almost as much so far as mental worry and deprivation of the comforts and luxuries, including spiritual and intellectual as well as physical luxuries, as it will affect the very poor. Even if we say they should worry, we must not overlook the fact that, by direct employment, indirect support through wages and various philanthropies, the well-to-do class, probably does more to support the very poor than the rich, considering the enormous numeric difference.

Just how much importance have food prices for the well-to-do, meaning families with incomes of \$2000-\$5000? Actual and proportionate distributions of family budgets vary widely, largely according to size of family but almost equally according to preferences for one or another means of comfort of ostentation. Approximately, it may be said that for every dollar spent for food, such families spend 25 to 40 cents for fuel, 25 to 75 cents for domestic wages, 50 cents for clothing for the man, 75 for the woman and 50 for the children; one to two dollars for rent, or its equivalent; 10 to 25 cents for public commodities, light, water, telephone, etc.; 50 cents to two dollars for recreation and amusement including travel and, therefore, railroad fares; and a dollar and a half for automobile, which has, for many, reduced the former item from what would have been considered normal a decade ago. These total somewhere from seven to ten dollars and may, on a very approximate basis, be considered daily expenses.

However these estimates may differ from the actual for a particular family, the fact remains that food is a compara-

tively small item of the total and one that, beyond actual physiologic needs and reasonable enjoyment, is not so strongly demanded as any one of the others. Even with regard to food itself, it makes no difference where a saving is affected. Most of these general subdivisions of the budget and most of the items in each, have increased 10-50% as compared with a generation ago and some have increased as much as the direct results of war. However, if we allow for direct and explainable increases due to war, an actual study of prices, shows that the pessimistic view of the increase of cost of living is not justified for a great many articles and we must admit, in general, that, barring immediate disturbances due to war, there has never been a time or place in the world's history where the average individual's labor produced so much in comfort as now and here.

When we think of control of food prices, the first notion, is that we are dealing with a unit. As a matter of fact, this notion is absolutely incorrect. We are dealing with laborers whose wages we certainly do not want to diminish, with small capitalists and producers (farmers, etc.) who are not earning unreasonable returns for their investment and personal labor, with speculators and trusts. On the whole, none of these classes engaged in food production and distribution can have their earnings and profits attacked in the interests of the public, with so much justice and freedom from hardship as those engaged in providing other commodities and services. For many kinds of foods, marine or land transportation is the main point at which to direct efforts toward lower prices. In other cases, customs duties must be changed and the tax directed in other ways. For milk, we must consider glass and fibre containers; for preserved vegetables and fruits, tinware, rather than the actual cost of production of the food itself. Any one can follow the line of argument for any particular food stuff and he will be surprised at the complexity of the general problem and at its tendency to go off on a tangent along a line that has nothing to do with food directly and that leads into all sorts of other considerations. For example, many kinds of foods can be materially reduced in price only by cheapening transportation. If we reduce to the standard of Europe or of certain parts of this country or hold against the advance now demanded, the rates of transportation for human beings, we can save for the average well-to-do individual (man, woman or child) as much or more than his yearly ration of a barrel of flour. If we limit the discussion to transportation after discharge from the railroad terminal or before it is reached, we find that, on any fairly large scale, carriage by gasoline motor is conceded to be the

most economic and that the principal items on which a saving can be effected are gasoline and tires. The former has advanced about 150%, the latter about 50%, the former without any real justification. But, if we compel the reduction of price of gasoline to the normal for the sake of hauling crackers and flour and vegetables, we will save the ultimate consumer of the foods approximately 15 cents a gallon on an average of 500 gallons a year—\$75. Right here, we have saved him about 20% of his entire food expense, not to mention the enormous saving of the government for its own military consumption and the inestimable advantage to many forms of industry and consequently to labor. If, following an entirely different line, we attempt, either by arbitrary interference with earnings, or by advice as to utilization of land, to reduce food prices by way of the farmer, we find that the same machinery of control would apply equally well to wool and other products not of the nature of food, either in the sense of automatic action, or of an extension of the mechanism of control beyond food stuffs. The saving in woolen clothing alone would equal the entire amount spent in a year for most groups of food stuffs, aside from meats and dairy products, the total for fruits or vegetables.

We have taken it for granted that the government means business in regard to food control and will depart from the precedent of non-interference with business methods. With this assumption, it is worth while to point out that reduction of prices should apply not only to the direct needs of the very poor but of those who will be called upon to bear a good share of the direct expense of the war and upon whom the welfare of the very poor largely depends. Prices should be controlled wherever a simple mechanism can be applied easily and directly to any great necessity or commodity or service of wide use, whether theoretically a necessity or not and it is better to curtail the profits of those of great wealth rather than of those of moderate wealth. Control should certainly include some of the great food staples but simply because these conform to the general principles which make control advisable and we should cut loose from the preconceived notion that what we eat is, under complicated civilized conditions, any more adapted to paternalism than anything else which the public uses in large measure.

The War Tax.

In peace times, the management of our country has cost about \$10 per capita per year. The direct and bonded war tax is about \$110. What it will be in future years, can

scarcely be guessed at. This tax is however, by no means so important as the indirect tax in the form of increased prices. Even before the war, the idea was gradually being accepted that the resources and industries of the country belonged to the whole people, not necessarily equally, not even proportionately to the value of the activities of the individual citizen but with some slight attention to the latter factor and with the dawn of the conception that mere exploitation of the value of one man's services by another or of national wealth by individuals, should be discouraged.

In the long run, it makes little difference, up to a reasonable limit which not even the exigencies of war are likely to exceed, how much one pays or how much the price of any one commodity increases, providing the total budget of the average man or family is not unduly increased. It does not even matter much whether the increase is for "necessities," providing the cost of comforts and certain luxuries can be correspondingly reduced. Doubling the price of bread, or sugar, or meat, is by no means so serious as might at first seem, if we can, some how or other, compensate for it in other ways. Railroad travel or the sending of a telegram may be quite as necessary in particular cases and the availability of telephone connection actually saves an enormous expense and may double or treble the efficiency of a man or a business. It is worth while considering that all three of these utilities cost us considerably more than they do the inhabitants of most other countries. For example, all along the Atlantic coast, where railroading involves few engineering problems, where the installation was complete years ago and requires merely maintenance and gradual improvement, where the volume of travel allows the greatest profit and economy of management, the prevailing rates are almost exactly 50% higher than for most parts of Europe and many parts of our own country. In some respects, the service is slightly better than in Europe but this superiority is not of great practical moment to the average traveler nor does it involve a proportionate increase in expense.

Last year, various oil companies reported profits of 50% on investment. Gasoline sells at over 200% of the formerly established profitable price. There is an increased demand but this, in itself, means greater profit, as the expense of production increases only for certain items of the manipulation. There is a decrease in supply only in the sense that guesses at the total natural supply at present known to exist, allow the estimate that it will last only for about 25 years. This is ample time for the development of substitute fuels or substitute means of power.

Hotels and restaurants which formerly threw in half a cent's worth of bread with orders representing 300-500% gross profit on foods, are now compelled to charge 10 cents for a cent's worth, at the present price. Hotels catering mainly to men of moderate means, not only charge \$3 for a night's lodging but announce the charge as reasonable although the lower half of the 10% of the population who have the greatest wealth, spend on the average 10-20 cents for this necessity. The very moderately skilled laborer who brings a meal from the kitchen to the table, or performs some similar menial task, expects something like the highest pay of the mechanic or clerical employee in addition to a salary that may be low but that represents about all his labor is worth.

The people are being urged not to hoard foods, but are not adequately protected against arbitrary and sudden increase in price. They are urged to substitute other grains for wheat but, over the counter, are charged more for the cheaper grains than for the more satisfactory staple of life. All sorts of industries, formerly conducted by individuals, such as washing, supplying milk, making repairs of all kinds, manufacturing articles of a domestic nature, blacking shoes, etc., are being taken over by firms for conduct on economic, wholesale lines, and the rates have been increased by 100% or more.

It is high time for the people to wake up to the fact that the old idea of selling labor and commodities at a fair value is being superseded by that of shearing velvet, that inevitable --and not always inevitable--increases in cost of raw material and labor are being passed on to the ultimate consumer with the addition of double or treble the actual increase in cost. Men of very moderate means--so far as can be judged, considerably less than 10% of the population have incomes of \$2,000 and more--are expected to pay for any particular item like millionaires. That this expectation has largely succeeded, is due mainly to the fact that they have themselves pretended to be able to do so.

The war may compel us to look facts squarely in the face; to drop this pretense, and to insist on a scale of valuation based on actual necessary cost and reasonable profit. If so, it will pay for itself. If not, it is difficult to see how we can continue without ruin.

Notes From Camp Sheridan.

This covers an irregular area of about $3\frac{1}{2}$ square miles, 2-3 miles N.E. of Montgomery, Ala. The soil is sandy, with deposits of gravel, and there is enough variation in grade to provide for free drainage by natural streams and ditches.

While an abundance of water could undoubtedly be obtained from wells, and of sufficient purity on account of the natural sand filters, the supply is taken from the city, which depends on Artesian wells. Electric current is also brought from the city. The surrounding country and, indeed, the camp site itself until taken over by the Government, is mainly occupied by negroes, living in small cabins, often with no windows. The condition of their premises is such that, in spite of sand filtration, most wells are very immediately contaminated or at least liable to contamination. Hence, all wells are placarded forbidden. The milk supply is also regarded as suspicious, and canned milk is used exclusively at present. There is no suspiciousness of sources of venereal infection. The proposition is a 99.40 approach to a sure thing. Hence, the only efficient means of avoiding infections of this nature are the reasonably prompt use of the modern prophylactic treatments, the restraint of soldiers already infected, if necessary by rigid confinement to detention camp and the activities of the military police—which have taken the place of the older temporary details under a provost martial. Any known danger point of any kind is guarded by the police. For instance a restaurant which did not conform to the necessary sanitary regulation, had police stationed at the doorway to prevent soldiers from entering—and it cleaned up. In regard to the venereal problem, it may well be that the general knowledge that infection is practically a sure thing—barring the result of prophylactic treatment—makes the actual incidence of cases less than with a small percentage of danger. And purely moral prophylaxis must be counted as an actual factor.

With a full division (approximately 25,000-30,000 men) there is bound to be a considerable aggregate of sickness and accident. Yet the theoretic mortality of such a body of men in peace, about 5:1,000 per year, has not been approached in the 2 or 3 months' experience. Probably the most frequent condition encountered is an exanthem, sometimes conforming to the condition of measles, sometimes to that of Rôtheln or German measles. Apparently more frequently than in peace, histories of recurrence and abortive and atypic cases are encountered. Such experience brings up the problem, already mentioned in this journal, of how diagnoses of exanthemata are to be absolutely established, and reminds us that, after all, we have very little scientific knowledge as to the identities and distinctions of the exanthemata. Practically, it is interesting to note that the old notion that exposure "drove in" measles, etc., or the more modern expression of the same idea to avoid criticism by the use of vaguer language, is not substantiated. In spite of inevitable exposure to cold in

camp the mortality has been nil and practically all cases have been mild.

As nearly all men have been subjected to prophylactic vaccination against typhoid and the two para-typhoids, the Widal reaction is obviously excluded, since one would expect a positive reaction in practically all cases. Direct cultural methods, applied to faeces and urine, have been reduced to a practical basis, though the number of cases is very small. For instance, in a period of about a month, 12 cases suggesting typhoid occurred, but only 4 proved to be genuinely so and none were serious or protracted.

Pneumonia at one time seemed to threaten to become numerically serious, but a sudden cold snap checked the admissions and, at the same time, all the cases that were individually regarded as serious, improved. Possibly flies are the determining factor in conveying the infection. At any rate, one is impressed with the idea that while we used to think of pneumonia as a disease of cold and exposure, and while later, we used to put our tongue in our cheeks when we called it an infection and continued to regard it practically as a manifestation of "taking cold," it now appears frankly as an infectious general fever. At the same time, as a precautionary measure which seems to be of marked advantage, the line is following the advice of the medical staff in conducting the various drills so as to avoid chilling after perspiring, and in enforcing sleeping regulations that provide for dry, warm clothing, with sufficient ventilation.

Active tuberculosis—not, of course, in the sense of severe cases, but in the sense of warrantable diagnosis—has been found in 8-10 soldiers per 1,000 generally. The Ohio troops, formerly of the National Guard, comprising this division have a lower incidence, on account of selection from a good class of men and preliminary medical examination. The lowest incidence rate is held by a Utah regiment whose surgeon not only conducted a painstaking examination, but subjected every suspicious case to an advisory board.

It should be stated that active tuberculosis in the military sense, is quite a different conception from that generally held. Obviously, it is rarely that cases are admitted to service, which at this stage would show tubercle bacilli in the sputum or even furnish sputum in appreciable amounts. The tuberculosis board exists for the purpose of preventing such an eventuality even after months of exposure in the trenches. Percussion being often practiced where silence cannot be had, must be palpatory rather than audible, and fine discriminations of voice and breath sounds are impracticable. Hence, the method of Col. Bushnell for developing rales has been

adopted as the best practical test for military purposes: Deep inhalation, full expiration terminating in a forced cough. Of course cases developing rales are subjected to closer study. Symptoms cannot be relied on as there is a temptation to exaggerate or misrepresent, sometimes to avoid, sometimes to secure military service. Misunderstandings also occur. For instance, haemorrhages are affirmed from nose bleed or accidental irritation of the pharynx, night sweats are construed to mean something entirely different. Cervical adenitis has been found almost universally, according to some, and is regarded as indicative of general, mild tuberculous involvement at an earlier age, healed before admission. The tonsils are also usually enlarged and ablation is encouraged. From some sections, most of the men have enlarged thyroids, rarely with symptoms. (Note: This is in keeping with Osler's observation in the valley of the Avon, and with the writer's in regard to Grand Island. There certainly is need of studying geology in connection with thyroid disease.)

The Tuberculosis Examining Board, from this recent experience with enormous numbers of normal men, has become sceptic as to the old notion that the right apex is normally relatively dull. In about 95% of all cases, no difference is noted, and the opinion is growing that the difference observed in civil practice is due to actual fibrosis. Only one cavity has been found in the entire division. The 1% or less of cases considered tuberculous are to be discharged, but it is hoped that some way may be devised to retain them under discipline for sanatorial treatment and eventual cure. Very few of these cases would show lesions by X-rays.

By a recent ruling, the radical operation for hernia is considered not dangerous to life and not necessarily involving a general anaesthetic. Hence along with haemorrhoids and enlarged tonsils, operation is compulsory and refusal subjects a man to court martial. However, some have doubted whether this would be the ultimate legal decision on appeal.

The medical men of the division, numbering somewhere between 150 and 200—there being frequent transfers—hold a society meeting every Friday at 7 p. m. Attendance is compulsory, unless one is engaged in more pressing duties or is excused.

That word compulsory suggests a needed explanation. Theoretically every thing in military life is compulsory. Many persons make themselves miserable over this fact, actually or in anticipation. The true philosophy can be acquired by considering one little item, about as absolutely compulsory as anything in military discipline, yet not laid down in any reg-

ulation. The priority of breeches over shoes in dressing is obligate, instead of facultate as in civil life. The raw recruit is likely to get the order reversed. If he is wise, he will accept the inevitable and learn how to dress from his first mistake. But there is a type of man who will tire himself by persisting in the attempt to dress the wrong way first, perhaps succeed in the attempt by tearing the knees out of his breeches. And there is another type who will immediately complain—more or less formally—and perhaps try to get the whole uniform changed.

It takes the first man only a few weeks to learn that he can dress more quickly than ever before, that he can keep warm—or cool—with fewer modifications of his garments, that his clothes are more economic than anything else he ever wore, that they will stand harder use and can be restored to a more presentable appearance more readily, that all sorts of button and suspender troubles are eliminated. In fact there is a reason for every little detail including the omissions.

The same general principle applies to almost everything else. There is a right way of doing almost everything, and there is a small percentage chance that the tyro will discover over the improvements that have been worked out, one item at a time, by many men of long experience. To return to the matter of medical meetings: It requires no argument that the surgeon ought to attend such a meeting and, as a matter of fact, it is a very pleasant duty. Also, the chances are about 9 out of 10 that if there were any really good reason why a man should be excused, even if the reason were purely personal or social, he would be. And, in these two humble illustrations, we have about the whole secret of adapting one's self to military discipline.

BOOK REVIEWS

Books mentioned may be inspected at and ordered through this office. So far as possible, books received in any month will be reviewed in the issue of the second month following. Pamphlets, quarterly and similar periodicals, reports, transactions, etc., will, as a rule, merely be mentioned.

Kirke's Handbook of Physiology. Charles Wilson Greene, Ph. D., University of Mo., Columbia. Wm. Wood & Co., N. Y. 9th American edition, 790 pages, 509 illustrations, many in color. \$3.75.

We protest against the price of this book. According to all analogies by number of pages, illustrations, scientific

value, etc., it should be \$5-\$7.50. There is not much to say in reviewing the standard, systematic treatise like this, especially when the book itself has become standard by its wide acceptance through many editions. It is somewhat like being called on to review the Bible or an edition of Shakespeare. In view of the recent interest in examination of aviators, special reference may be made to the illustrations of the semi-circular canals and the discussion of the sense of equilibrium.

Impotence and Sterility, with Aberrations of the Sexual Function and Sex-Gland Implantation. G. Frank Lydston, M. D., D. C. L. The Riverton Press, 25 E. Washington St., Chicago. 235 pages, illustrated. \$4.00.

It is stated that the book is sold only by subscription but we understand that copies may be secured by sending \$4.00 to the publishers who will then transmit the book postage prepaid.

Dr. Lydston's work in regard to implantation has aroused so much interest that the profession is, at least familiar with the general subject. This book, however, deals more widely with sexual problems and in a sensible way. We are especially pleased to note that the contention of this journal that legislation should protect the innocence of childhood irrespective of sex, receives the support of Dr. Lydston.

A Manual of Anatomy. By Henry Erdmann Radasch, M.Sc., M. D., Assistant Professor of Histology and Embryology in Jefferson Medical College. Cloth. Price \$3.50 net. Pp. 489, with 329 illustrations. Philadelphia: W. B. Saunders Company, 1917.

This was written for the purpose of filling the need for an anatomy of moderate size for the use of medical students and nurses. One result of the attempt has been so to condense the material that the various anatomic units composing each of the great systems of the body appear to be treated as related structures rather than as independent units whose relation to each other and to the body as a whole is merely incidental—an impression which is apt to be given by the voluminous discussions of the larger textbooks on anatomy. This feature is especially noticeable and helpful in the sections dealing with the anatomy and the histology of the nerve system, in which the gross anatomy and the microscopic anatomy are continued uninterruptedly from segment to another; in addition, the various pathways are given separate

and rather full consideration, so that impulses may be traced, in a connected manner, from origin to termination.

An Introduction to the History of Medicine. With medical chronology, suggestions for study and bibliographic data. By Fielding H. Garrison, A.B., M.D., Principal Assistant Librarian, Surgeon General's office, Washington, D. C. Octavo, 904 pages; illustrated. Second edition. Revised and enlarged. Cloth. Price \$6.50 net. Philadelphia and London: W. B. Saunders Company, 1917.

The second edition of Dr. Garrison's book arouses anew the enthusiasm we expressed when reviewing the first edition. As a mere compilation of facts the book alone astonishes by its amazing accuracy. We have read large sections of this book with a keenly critical eye and with the exception of one or two instances, we have not found an error of either commission or of omission. The erudition and research involved in writing this history seems more the result of a lifetime than a matter of a few years. When, in addition, we find our facts so beautifully and logically marshalled, a critique and a sense of historical values there are almost infallible, a delicious characterization and a literary style unequalled among medical men in this country, we can readily perceive why this book has been received with such profound approbation. We repeat that Garrison's book work is one of which American medicine may well be proud.

The Treatment of Infected Wounds. By A. Carrel and G. Dehelly. Authorized translation from the French by Herbert Child, M. D., formerly Surgeon French Red Cross, Capt. R. A. M. C. (Ty.), with an introduction by Sir Anthony A. Bowlby, F.R.C.S., Temporary Surgeon General, Army Medical Service. 12mo, cloth, 250 pages, 97 illustrations. \$2.00. New York, Paul B. Hoeber, 1917.

This monograph presents one complete method of treatment and gives a concise history of its development. "The method is based upon the employment, rigorously controlled by the microscope, of an approved agent, under conditions of contact, of concentration, and of duration, established by direct experiment upon infected wounds." The agent is Dakin's solution of hypochloride of soda, which acts by chemiotherapy; but first the wound undergoes a thorough "mechanical cleansing" or surgical preparation for treatment by the solution. The technic of all these procedures is carefully described. The preparation and application of the solution, the

routine daily examination of wounds—clinical and bacteriological—to note the progress of sterilization, the keeping of records, and the final closure of sterile wounds, are all set forth with sufficient detail to enable any surgeon to use the method understandingly. Forty pages, well illustrated, discuss the results of this treatment, including statistics of successes and failures. Very little space is devoted to the controversies that have followed the introduction of this method, but surgeons are urged to use the method “in its entirety” before deciding pro or con. A very complete index facilitates reference to any topic treated by the authors.—F. W. B.

A Dietary Computer. Amy Elizabeth Pope, San Francisco. G. P. Putnam's Sons, New York. 156 pages, \$1.25.

In these days of greatly awakened interest in Dietetics, due to the impetus caused by the food problem under war conditions, this book will prove to be very practical for nurses working in conjunction with physicians on special diets, or for the laity who desire to use scientific principles in planning the family dietary. It includes a statement with regard to the general principles underlying food requirements under different conditions, with a simple method of calculating the fuel value of the necessary menus and lists of foods relatively rich in special constituents. There are also tables showing the chemical composition and caloric value of common foods and beverages, which include, in the case of the more commonly used foods, the size of a single portion, and tables showing the cost, chemical composition and caloric value of some special diabetic foods, with a table showing the average relative carbohydrate content of food. The caloric values of the more common species of invalid cookery are given.—Ruth Raymond, B. S.

The Medical Record Visiting List For 1918. Handsomely bound in red morocco with flap, pencil, etc. \$1.75. William Wood & Co., New York City.

The text portion of the Medical Record Visiting List for 1918 contains a calendar, Estimation of the Probable Duration of Pregnancy, Obstetric Calendar on Folding Chart, Approximate Equivalents of Temperature, Weight, Capacity, Measure, etc., Maximum Adult Doses by the Mouth, in Apothecaries and Decimal Measures, Drops in a Fluid Drachm of different liquids under different conditions, Solutions for Subcutaneous Injection, Diagnostic Hints on Contagious Diseases, Poisons and their Antidotes, Emergencies, Artificial Respira-

tion, Signs of death, Hints on the Writing of Wills, Table of Signs, Visiting List with special memoranda, Consultation Practice, Obstetric Engagements, Record of Obstetric Practice, Record of Vaccinations, Register of Deaths, Nurses' addresses, Addresses of patients and others, and a cash account.

Physicians' Visiting List for 1918. Substantially bound in soft black leather, with flap and pencil and pocket. \$1.25. P. Blakiston's Sons & Co., Philadelphia, Pa.

The Physician's Visiting List for 1918 contains besides blank pages for memoranda, addresses, engagements, accounts and records of births and deaths, a special division devoted to a calendar, Utero-Gestation table, American table of mortality, Poisoning, Weights and measures, Comparison of thermometers, Table of signs, Asphyxia and Apnoea, Dose table, Isolation periods in infectious diseases and a height and weight table.

AUTOMOBILE HINTS.

The Beginner should realize that the care of an automobile involves a great deal of hard work, about half an hour labor to every hour of running. A man who is liable to injury from strain and exposure to cold after overheating, who has a hernia liable to become incarcerated, a chronic nephritis, brittle arteries, a bad heart or any comparable lesion, should not have an automobile unless he can have some one run it for him, all the time.

Before Buying a New Car, especially an orphan, get the actual experience of several purchasers who have run it for 5,000 miles or more, as to mileage per gallon of gasoline and oil, whether it is too heavy for the tires, whether it stands up well and whether it is convenient to care for. Trivial but really important points are whether there is space for carrying oil, extra tires, etc., whether the engine oil receptacle can be filled without special funnels, whether the greasing places are unreasonably numerous and of different kinds, whether they are accessible, how often they need attention, and whether grease cups, etc., are tight and properly threaded. (We speak from current unfortunate experience). For instance, in an average yearly run of 10,000 miles, it makes a difference of a full day's time, whether greasings have to be done every 50 or every 200 miles, whether you have to dismember the car to give it routine attention, whether a few, tight, properly placed greasing points can be attended to in five minutes, or whether you have to dress for

the occasion in overalls and waste ten or fifteen minutes because a grease cup has come off or sticks or the thread allows only a few turns or does not catch at all.

Winter Care. Drain the radiator and have rubber connections replaced if worn and even small leaks repaired. It makes a difference whether you are wasting water or alcohol. As you drain the radiator, collect the water and measure carefully to know the contents of the radiation system. It is, of course, more convenient to have this in liters and c.c. than gallons and quarts. A gallon is almost exactly 3750 c.c. Denatured and wood alcohol are about equally good and are the only practical anti-freeze substances. Glycerine, 5-10% is not so much a protection against freezing as a preventive of the more rapid evaporation of the alcohol. It is expensive and is not absolutely efficient for the purpose stated. The simplest method is to fill the radiator with either kind of alcohol, 33 1/3% in water, which will protect down to about 15° below zero Fahrenheit. Such a mixture, however, boils when running at moderate winter temperatures, especially with a hood cover. It is, therefore, unsuited for the majority of winter demands and it tends to lose its alcohol rapidly, so that it is inefficient against freezing when the cold becomes extreme. A good rule is that every 5% of alcohol protects for 7° F. below freezing point. Hence, as cold weather begins, add 5% of the total contents of the radiator, having purposely kept the water rather lower than in summer, to allow room. Always add alcohol before running the engine, to provide for thorough mixture, and preferably after standing long enough for the contents to cool, to avoid considerable immediate evaporation. When the temperature is likely to go below 25° F., add 5% more, protecting down to 18° and so on. 25% protects to—3° F., theoretically. Practically, the alcohol of either kind, as purchased, is not quite 100% strength and, even if glycerine is used, the alcohol will evaporate faster than the water. On the other hand, if a hood cover is used and the car is not kept standing in the cold for more than 3-6 hours, according to the capacity of the radiator, only a little of the lower part of the radiator will freeze and then in the form of only slightly expansive slush-ice, so that the walls are not apt to be ruptured. By keeping a record of the actual amounts of alcohol added from time to time and adding them, the percentage can be readily calculated, except that allowance must be made as just indicated. On reaching the minimum temperature likely to be encountered, it is well to make up a solution of the corresponding strength (15% for 11° F., 20% for 4° F., 25% for 3° F.) and add this as required, until the

cold abates when weaker solutions can be used and finally plain water. When danger of freezing is past, drain and wash the radiator and start on plain water again. A little extra alcohol should be added occasionally to allow for excess evaporation. When you put the car up on an unusually cold night, siphon off or drain out a small vial of the radiator mixture and set it outdoors to note whether it freezes and whether, if so, it is frozen solid or only with a little slush at the bottom. This simple test will show whether you are protected or not and you can even refine the test by taking the critical point with a laboratory thermometer and calculating the percentage actually present by the rule already given. Remember that if you have had a mechanic do anything to your car beyond tightening a nut on the chassis, he has probably drained the radiator, thrown away or kept the alcohol mixture and filled the radiator with plain water.

Starting in Winter. If you use a storage battery, have it tested at the beginning of cold weather. Batteries freeze. A hood cover probably pays for itself in gasoline and battery wear, in the course of a winter. Drain out old engine oil, clean spark plugs, brighten and tighten all ignition connections, have the coil points filed and adjusted and use a slightly richer gas mixture by permanent adjustment of the carburetor. In other words, remove all possible obstacles to ignition. Remember that a self starter is simply a substitute for hand cranking. For moderate degrees of cold of the engine itself—depending, of course, not only on out-door temperature but the time the car has stood without running—it is necessary only to enrich the mixture and to choke off the air admitted. For very cold engines, actual priming, as by a cup leading to the manifold for machines not provided with funnels and pet cocks, or the use of 2 c.c. of gasoline poured into two or more cylinders through the funnels, should be practiced. With these precautions, 6 quarter turns for a Ford or two or three brief spins with a starter on other cars should suffice even after long standing on a cold night. When you hear a starter going for 10 or 15 minutes it means one of two things, either the man in the car is richer or less rational than his mixture.

Tires. Pneumonia has followed the chill due to perspiration in changing a tire. If possible start the winter with new tires. Use easily detachable chains. Carry inflated tires on wheels or rims that are really easily applied. If these precautions are not feasible, risk spoiling a tire by running flat to the nearest garage. A short run in snow does comparatively little harm as a rule.

Accidental Ignition. A man in Dubuque, last winter, de-

veloped enough frictional electricity by the movement of his arms while walking in a fur coat, and this was stored by the fact that he was insulated by rubber boots so that, when he used a priming cup, it exploded. The man was badly burned and the car and garage completely destroyed.

Exhaust Gases. We have already called attention to a fatal case in Buffalo. Never let the engine run for more than a minute or two in a closed garage. If necessary to make tests with the engine running, open the door or fasten a piece of garden hose over the exhaust pipe and conduct the gases outdoors through an augur hole.

Safety First. The peculiar conditions due to mud, wet pavements, especially before oil has been washed away, dead leaves, snow and ice, can be determined only by actual experience. This experience may not be of further use unless gradually acquired at slow speed. As a rough rule, the following speeds may be considered safe: No danger of skidding, brakes in good condition, vision clear, and unobstructed, 10 miles an hour at corners and crossings, 15 in the middle of blocks in a city or village, 20 in long city blocks with little traffic, 30 in the country, with no vehicles within 500 feet. If any of the favorable factors are wanting, the limits are 5-20 miles. Most accidents to pedestrians and a majority to automobilists are due to insistence on right of way. Always give the right of way to a child, a delivery Ford, a truck and a dealer. If, for any reason you can not see a clear road ahead for 500 feet, blow the horn, keep well to the right and go into neutral or reduce speed.

TOPICS OF PUBLIC INTEREST

Coat of Arms of Medical Corps. Col. C. C. McCulloch, Jr., M. D., Librarian, Surgeon-General's Library (Military Surgeon. Aug.) gives the technical heraldic description as follows:

Arms.—Per pale: dexter an escutcheon paly, of seven gules and six argent; chief dexter azure charged with mullets, five fessways and four paleways, argent; sinister argent charged with a serpent entwined on a staff paleways, all proper.

Crest.—A cock walking, gardant sinister, proper.

Motto.—*Experientia et progressus.*

In other words, the conventional shield bears on the longitudinal half at the viewer's left, a conventional U. S. flag with 20 stars, in four horizontal rows of five each, at the top, while the lower two-thirds contains longitudinally, the 7 red

and 6 white stripes, the latter, like the right half of the shield being in silver. The right half bears a single-serpent caduceus. The shield is surmounted with a rooster, headed to the left but with the face turned toward the tail and a scroll below bears the motto. Strangely enough, there is no historic record of the adoption of the coat of arms but the number of stars (20) would date it between the admission of the 20th state, Mississippi, Dec. 10, 1817 and of the 21st, Illinois, Dec. 3, 1818, and this assumption is corroborated by the fact that the Medical Corps was organized by act of congress, April 14, 1818, from the previously existing Medical Dept. which, indeed, dated back to the Hospital Dept. organized in 1775 under Dr. Benjamin Church as Director General and Chief Physician.

A New Specialty and a New Word Needed. Orthopaedics, often written orthopedics and, perhaps on that account, perhaps because of the inevitable inclusion of foot deformities, understood to allude to the feet instead of to the straightening out of children generally, has come to have a new and far different meaning since the beginning of the present war. The correction of traumatic deformities, the restoration of function of joints and muscles, the correction of inevitable cripplings by artificial devices, the education of more or less handicapped soldiers in manual and other muscular movements in the various arts and crafts, obviously constitute a specialty involving quite different principles and methods from orthopaedics in the old sense, though depending upon the same experience and general kind of therapeutic skill. But, while this new specialty necessarily draws at present upon the personnel of orthopaedists, it is doubtful whether the two lines of work will not practically demand a division of fields, in the future, perhaps as soon as a sufficient number of men have been trained in the new specialty. Here is need of a new term and we miss the guidance of the late Dr. Achilles Rose. Tentatively, we suggest Orthandrics or Orthostratics (man or soldier—straightening).

Educational Value of Patent Medicine. The Medical Economist quotes the following advertisement from an Ohio paper. The therapeutic effect is not more wonderful than many others reported from patent medicines but the incidental educational value is very modestly overlooked by the manufacturers. They should have their product adopted by the public schools.

“I took the whooping cough when I was only two months old. It settled on my lungs and I gradually declined until it

was necessary to carry me on a pillow. They took me to the doctor and tried every one they thought would help me, but got little relief from my cough. After taking a bottle of your medicine I found that I was improving very much. I have taken Nacor until my cough is almost gone. I am now seven years old, weigh 46 pounds and go to school every day. I give Nacor all the praise for my relief and hope that I can only cause someone else to try it."

Missing Links of Buffalo Medical Journal Wanted. Vol. 15 of the old series was published in N. Y., under the editorship of Dr. Austin Flint, Jr., under the title of New York Monthly Review and Buffalo Medical Journal, the first number being that of June 1859. The twelfth number mentions an extra issue containing lectures of Prof. Dalton, supplementary to April issue of the 13th volume, and a thirteenth, June issue with title page and index, lacking from our file of bound volumes. The twelfth (May 1860) issue goes on to state that "with the succeeding or July number, will commence the first number of the combined journal" but we find no explanation of what is meant by this term. We understand, however, that the old series was merged with the American Medical Monthly in July 1860, but have no copies of this combined journal. The new series was begun in August 1861, the editor modestly refraining from giving his name—unless on the cover which is absent from our bound file—but seems to have been Dr. Miner, from a letter published. The title was Buffalo Medical and Surgical Journal and Reporter, explained in a sarcastic note at the end of the first issue, as due to the prohibition of the original name by Mr. A. I. Mathews (sic), who was a druggist well known to old Buffalonians and who had some property rights in the old series. From this time on, our file is complete. The exact title was changed several times and, under the management of Dr. Potter, reverted to the original form and the numbering of volumes was made continuous from the beginning of the old series. We hope that some of our readers can supply the missing links mentioned and furnish a historic article on the editorial changes of the Journal.

Pay of Army Surgeons for the Civil War. Our issue of Nov. 1861 quotes from a circular from the War Dept., Jan. 1860 as follows: Asst. Surgeon, under five years' service \$53.33 per month, rations \$36, forage for horse \$8, servant \$12, clothing for servant \$2.50, servant's rations \$9. Total receivable \$120.83. Over five years' service, \$70 per month, other allowances same, total receivable \$137.50. Total re-

ceivable over ten years' service, \$173.50. Surgeon, under ten years' service, \$80 per month, total amount for servant \$47, aggregate receivable, including horse and servant, \$187. Surgeon over ten years' service, \$80, aggregate amount receivable \$223. Allowance for forage and servants is paid only when they actually employ and keep in service the number of servants and horses charged for. In addition, both assistant and full surgeons are allowed an additional ration per day after the termination of every five years' service. (Note: As we understand the terms, the actual receipts besides allowances for horse and servant were as follows: 1st five years, assistant surgeon, \$1072. 2d five years without promotion, \$1704. 2d five years with promotion to grade of surgeon, \$1824. 3d five years, rank of surgeon, \$2256. 4th five years, rank of surgeon, \$2688. Considering the different value of the dollar in purchasing power, these salaries are not very different from the present).

In January, 1862, a bill was introduced providing for a Surgeon-General, ranking as Brigadier General, a Sanitary Inspector General ranking as Colonel, six Sanitary Inspectors ranking as Lt. Colonels, Surgeons of first class ranking as majors, 50 Surgeons of second class ranking as captains and not over 70 Assistant Surgeons ranking as 1st lieutenant, all as of cavalry. This was essentially the same as the system up to the present, except as to the numbers. Salaries are not mentioned but editorially, the bill is highly commended and they were therefore, apparently regarded as satisfactory.

Patriotism and Common Sense. In spite of the opposition to the teaching of German in the public schools, it is interesting to note that more pupils have elected this study in Buffalo than before. If there ever was a time when loyal Americans needed to know German, this is it. In this connection, it may be said that the expression of prejudice against everything German is of very little military value. To Americans of German descent who may have considered a change of name, we would point out the confusion which would have resulted if, at the time of the Revolution, British surnames had been discarded for those of indigenous origin. So far as we have ever heard, nothing of the sort was even suggested. The President has made it clear that we bear no malice toward the German people, let us not imagine that we are showing loyalty by trying to annihilate either the German language, German science, especially medical, or German music—altogether it is obviously in bad taste under present conditions to play the national airs of hostile nations. We understand that a woman has been arrested for criticising

the uniform of our soldiers. Hence, if called to service, learn to retract your larynx and remember that the priority of breeches over shoes in dressing is obligate and not facultative as in peace. But, we will take the chance of being hanged by remarking that it is not edifying, either aesthetically or as indicative of our commercial independence in regard to the dye industry to see a squad of eight men attired in sixteen shades of clothing from something properly termed olive drab, through various brindles down to a soiled cream color.

Unit of 100 American Army Surgeons Organized for Service in the Hospitals of Roumania. This is the first detachment under the Surgeon-General to be sent for service abroad other than with the French, British or American forces. This detachment is under Col. Walter D. McCaw of the Regular Army and in addition to the 100 Army Surgeons are a few nurses.

Tuberculosis in War. It is stated that half a million cases of tuberculosis have developed in the French Army—about $\frac{1}{8}$ of the entire number of troops—and that, while statistics are not available, the disease is rife among the Germans. About 2% of the men called for draft examination in this country show active lesions. Against the cost of war must be credited the benefit of knowing where we stand in the matter of tuberculosis, possibly the benefit of relief of incipient cases by camp training. On the other hand, an additional charge against war will be the spread of infection in active service under unfavorable hygienic and sanitary conditions.

Wanted: Pets for the Army. The boys in the camps of the new National Army are sending out requests for pets of any variety.

Health at Camps Improve. Pneumonia epidemics in some southern camps, most prevalent where there are many cases of measles. The sick rate in the National Guard is 42.6 a thousand, compared with 28.5 for the National Army men. The highest rate come from camps at which southern troops are training.

Report of Health Conditions Among the American Soldiers in France. Percentages given are on the basis of 1,000 men per year. Pneumonia, 16.6; dysentery, 2; malaria, 1; venereal diseases, 181.5; typhoid, 0; para-typhoid, 0; measles, 21.7; meningitis, 1; scarlet fever, 1.9 per cent.

Hospital Ready at Fort Niagara. Twelve new hospital buildings with wide verandas are ready for occupancy. They have a capacity of about 300. A base hospital probably will be established there as soon as there is need for it.

Base Hospital Unit No. 23, organized and recruited in Buffalo, left November 21st, for somewhere presumably France. It will undoubtedly be the first Buffalo unit to cross the ocean.

Health Commissioner Fronczak does not approve of housing persons in old freight cars as a means of meeting the shortage of living accommodations in Buffalo. He is trying to enlist the aid of a philanthropist to build model tenements.

Buffalo Medical Station Meets Argument. Health Commissioner Fronczak recommends that a public station be established under the direction of the department of health for advice, prevention and early treatment of venereal diseases. He would have the station in the district bounded by Main, Pine, Exchange and Genesee Streets. Dr. Walter S. Goodale, superintendent of hospitals and dispensaries, while not opposing the purpose of the station, questioned its advisability, especially as the city is adequately equipped with dispensaries, health centers and with a hospital where such diseases may be treated. He said that the station would have to have a sign indicating its purpose and the district in which it would be located would receive a certain stigma thereby. He doubted whether persons needing treatment would go to such a place. Dr. Fronczak and Dr. Grover Wende said that the station should be near the source of infection. Dr. Wende said that there is such a station at each army cantonment and that the war department has recommended them for cities for the protection of soldiers.

Medical Staff for Home Defense Corps. Dr. Earl P. Lothrop will be major in charge of the hospital corps; Dr. A. H. Cooke will be captain and surgeon of the 2d battalion; Dr. Lawrence Hendee will be surgeon of the 3d battalion with rank of captain.

The Universal Military Training League, 1st National Bank Bldg., Chicago, is seeking to secure legislation now that would authorize universal military training as soon after the cantonments were vacated, as the War Department can handle the matter without embarrassment in the conduct of the war. It feels that if we wait until the war is ended, ques-

tions of peace and readjustment will so obsess the people that military training will be side-tracked and no thought will be given to keeping ourselves in a condition for future defense.

The Buffalo Marine Hospital, which formerly accepted sailors only, is now open to all branches of the service and to all federal employees.

The J. N. Adam Memorial Hospital at Perrysburg has been granted \$15,000 by the councilmen to be used for the erection of new buildings.

Scarlet Fever Serum. Dr. Carl Klin, a bacteriologist and an assistant physician in charge of the Stockholm contagious hospital, has announced to the Swedish Medical Society the discovery of a serum for scarlet fever. He said that the serum had reduced the mortality in the severest cases to 17 3-5% against more than 70% in equally severe cases which were not treated with the serum. Blood was taken from convalescent patients and was allowed to stand until the serum had separated from the other blood constituents. This was administered intravenously by the use of 20 cubic centiliters for small children, and up to 50 or 60 for adults. This treatment had no effect on nephritis.

Automobiles caused the death of 801 persons in New York State during the first ten months of 1917, an increase of 197 over the figures for the corresponding period of 1916.

Smallpox has developed in two negroes working for the Lehigh Valley Railroad. All of the 100 negroes who are quartered by the company in railway cars have been vaccinated by order of the Health Commissioner and a guard has been placed around the cars.

Births and Deaths. Health Officer W. A. Scott of Niagara Falls, has reported to City Manager O. E. Carr that statistics compiled by the bureau of vital statistics show that there were 45 deaths and 127 births in November.

Deaths in Army Cantonments. For the week of Nov. 23, 97 died out of 374,762 national guard soldiers and 60 out of 426,310 national army soldiers. Roughly speaking, men of military age would normally have a death rate of about 5:1,000 per annum or, say, 1:10,000 per week.

SOCIETY MEETINGS

The Buffalo Academy of Medicine passed the following resolution at a council meeting on October 5th: "Dues of members in military service of U. S. Army or Red Cross be omitted and that members be considered in good standing until return to civil practice; and that any moneys paid by them while in active service be refunded." Notify Secretary on entrance to service.

Buffalo Academy of Medicine. Section of Obstetrics and Gynecology, Wednesday, November 21, program: Conservative Treatment of Eclampsia, by Dr. R. McPherson, New York City.

Section of Obstetrics and Gynecology, Wednesday, November 28, Program: The Micro-organisms of the Mouth and Throat and their Significance, by Dr. O. W. Mitchell, Syracuse, N. Y. Discussion opened by Dr. DeLancy Rochester.

Surgical Section: Wednesday, December 5, Program: Non-union in fractures Resulting from Gunshot Wounds, by Dr. W. E. Gallie, Toronto, Ont. Discussion opened by Dr. E. R. McGuire. The Place of Intra-Spinous Therapy in Urology, by Dr. E. M. Watson, Buffalo.

Section of Medicine, Wednesday, December 12. Program: The Drug Habit: Alcoholism, Morphinism, Nicotinism, by Dr. Henry R. Hopkins. Some Interesting Cases of General Infections from Local Foci, by Dr. DeLancy Rochester.

Section of Obstetrics and Gynecology, Wednesday, December 19th. Program: Delivery by Foot or Feet, Dr. P. W. Van Peyma; The Nasal Reflex in Gynecology, Dr. G. F. Cott.

Elmira Academy of Medicine, Wednesday, December 5. Annual election of officers. Program: President's Address; Dr. R. B. Howland, Dr. F. L. Christian.

Medical Society of the State of New York. Section on Pediatrics. The following doctors participated in the annual fall clinical day, December 13th, New York City: Clinic on the Treatment of Diabetes in Children, by Dr. Frederick M. Allen; New Method of Estimating Acidosis in the Blood, by Dr. Donald Van Slyke; Clinic on Newer Methods of Diagnosis and Treatment of Hydrocephalus, by Dr. Chas. A. Elsberg; The Surgical Treatment of Birth Palsy, by Dr. Alfred S. Taylor; Practical Demonstrations of Some Recent Clinical Methods, by Drs. Linneaus La Fetra, Chas. H. Smith, Oscar M. Schloss, Herbert B. Wilcox; Arthritis of Scarlet Fever, by Dr. C. P. Sharpe; New Plans for the Health Centers, by Dr.

Haven Emerson; The National Danger from Defective Development of Growing Children in Time of War, by Dr. Henry D. Chapin; The Hypertonic Infant, the Curative Action of Atropin upon Certain of its Manifestations, by Dr. Sidney V. Haas.

Rochester Academy of Medicine. Meeting of Section IV. Wednesday, December 12. Program: War, and Its Effects on the Civil Population During and After War, Dr. George Goler.

Medical Society of the County of Erie. Annual election December 17: President, Dr. George F. Cott; 1st Vice-President, Dr. James E. King; 2d Vice-President, Dr. Earl P. Lothrop; Secretary, Dr. Franklin C. Gram; Treasurer, Dr. Albert T. Lytle; Censors, Dr. John D. Bonnar, Dr. Francis C. Fronczak, Dr. Arthur G. Bennett, Dr. Archibald D. Carpenter, Dr. Frank A. Valente; Chairman Committee on Legislation, Dr. Harvey R. Gaylord; Chairman Committee on Public Health, Dr. Nelson G. Russell; Chairman Committee on Membership, Dr. William F. Jacobs; Chairman Committee on Economics, Dr. John V. Woodruff; Delegates to State Society, Dr. Arthur G. Bennett, Dr. George F. Cott, Dr. Julius Richter, Dr. Franklin W. Barrows.

The Government requires each county to furnish 15 per cent of all practicing physicians for the Medical Reserve Corps. Erie County has thus far furnished less than 10 per cent and efforts are being made to secure the remainder. Immediate volunteers are requested.

PERSONAL

Announcement of removal, travel, and other matters of interest are requested. Please report errors in the listing of any physician in the State and other directories, that we may co-operate with the State Society in securing a correct list.

Dr. C. L. Randall of Franklinville left for Salt Lake City on December 17 to fill a vacancy in the United States Indian reservation department. He expects to be gone till next May.

Dr. Robert C. Kenner, Editor of the Therapeutic Record of Louisville, Ky., spent the first week of December in Buffalo.

Dr. J. W. Grosvenor of Buffalo has returned from a visit in Philadelphia, Pa.

Dr. John J. Hanavan of East Aurora sustained a fractured arm in an auto collision.

Dr. E. E. Hummel, formerly of Darien Centre, N. Y., is now associated with Dr. George L. Brown, and will limit his practice to diseases of the rectum.

Health Officers of Western New York who have been taking a course at the University of Buffalo, gave a dinner on Nov. 21st at the Hotel Statler in honor of Dr. Wm. G. Bissell, city bacteriologist. For six weeks they attended lectures by Dr. Bissell at the city laboratories of the health department in William Street. Those at the dinner were: T. P. Barnard, North Tonawanda; Thos. E. Fleming, Gardenville; F. A. Helwig, Akron; Thos. A. Kerr, Lewiston; Willard B. Jolls, Orchard Park; Chas. Kelley, Franklinville; Myron M. Metz, Williamsville; J. W. Crews, Pittsford; J. H. Leary, Rush; Lester N. Lougee, Marilla; A. W. Wagner, Buffalo; A. B. Harding, Castile; H. C. Mann, Holland; J. J. Redmond, Fillmore; F. A. Watters, Lockport; A. E. Brennan, Erie; W. H. Baker, Williamsville; and S. G. Hermance, Clarkson.

Dr. George E. Fell of Chicago, Ill., announces a series of addresses to be given before the lodges of the Masonic fraternity of the State of Illinois.

Dr. Alfred H. Noehren of East Utica street, Buffalo, has returned from Rochester, Minn.

MILITARY PERSONALS

To Army Medical School, Washington, D. C., Lieut. Francis J. A. Bennett, Auburn.

To Camp Custer, Battle Creek, Mich., Capt. Alfred W. Armstrong, Canandaigua.

To Camp Dix, Wrightstown, N. J., Lieut. Harold F. Mickle, Seneca Falls.

To Chicago Northwestern University Dental School, Lieuts. George S. Skiff, Gainesville; Frederick W. Lester, Seneca Falls.

To Fort Oglethorpe, Lieut. Frederick C. Devendorf, Utica.

To Fort Sam Houston, Texas, Lieut. Francis T. Duffy, Troy.

To Ithaca, Cornell University, Capt. Samuel A. Munford, Ithaca.

To New Orleans, La., Charity Hospital, Lieut. Edward P. Flood, Albany.

To New York City, Roosevelt Hospital, Capt. Archer D. Babcock, Randolph.

To Camp Lee, Petersburg, Va., Lieut. Francis Argus, Buffalo.

To Camp Upton, Yaphank, L. I., Capts. Walter H. Vosburg, Dunkirk; Joseph R. Culkin, Rochester.

To New York City, U. S. Army General Hospital No. 1, Lieuts. Myer S. Bloom, Binghamton; Edwin C. Foster, Penn Yan.

To Camp Sherman, Chillicothe, Ohio, Lieuts. Byron C. Shults, Albany; Howard C. Murphy, Herkimer; Albert C. Burand, Ithaca.

To Fort Banks, Mass., Lieut. William J. Wansboro, Albany.

To Fort Niagara, Lieut. Edward F. Gillick, Niagara Falls.

To Fort Riley, Kan., Lieut. Roy J. Marshall, Rome.

To New York City, for special hospital work, Major Marin B. Tinker; Capt. George S. Britten, Syracuse; Maurice D. Barnette, Watertown.

To Plattsburg Barracks, for duty in connection with the examination of candidates for aviation, Capt. George F. Cott, Buffalo; Lieut. Edward F. Meister, Buffalo.

To Rochester, Minn., Lieuts. Frank A. Walder, Lockport; Paul M. Parker, Rochester; Philip Gordon, Rochester.

To his home and the inactive list on account of being physically disqualified for active service, Lieut. Samuel W. Houston, Walcott.

Capt. Charles E. Long of Buffalo has been transferred to the Mobilization Camp Aviation Section Signal Corps, Camp Sheridan, Montgomery, Ala.

OBITUARY

Readers are requested to report promptly the death of all physicians in Western New York, or former residents of this region, or graduates of any medical school in Western New York, and to notify the families of the deceased of our desire to publish adequate Obituary notices.

Dr. Jason T. Wallace, Oneida, N. Y., New York Homoeopathic Medical College, New York City, 1865, age 81, a member of the first board of education and of the board of health of Oneida, died in that city November 16 from heart disease.

Dr. Frank Henry Columbus Zornow, Pittsford, N. Y., New York Homoeopathic Medical College, New York City, 1917, age 24, an interne in the Rochester, N. Y., Homeopathic Hospital, died in that institution October 25, from diphtheria.

Dr. Lewis Arthur Welles Alleman, Geneva, N. Y. Jefferson Medical College, 1886, age 55, died November 3.

Mr. James H. Chambers, the founder and for more than 35 years the President of the Dios Chemical Co., St. Louis, Mo., died November 6.

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ORIGINAL ARTICLES

The right is reserved to decline papers not dealing with practical medical and surgical subjects, and such as might offend or fail to interest readers. Contributors are solely responsible for opinions, methods of expression and revision of proof.

The Important Element in the Treatment of Cases of Prostatic Obstruction.

DR. ARTHUR L. CHUTE, Boston.

The subject which I bring before you is one that has been of great interest to me for several years past and to the clinical consideration of which I have devoted a good deal of time. Much of it deals with rather vague and not clearly demonstrated points, whose working is more easily shown on a group of patients than described in a paper. Much that relates to it is hard to give in definite terms or figures and any attempts to do this are quite apt to be misleading.

When one considers the amount of trauma done in carrying out a prostatectomy—either suprapubic or perineal—as compared with the much greater degree of injury often done in many of the serious pelvic operations, he is struck with the much greater mortality that attends prostatectomy. It is impossible to get figures that bear very definitely on this point, but I think that most men will agree with me, that in the hands of good general surgeons the mortality from prostatectomy is much greater than the mortality following pelvic operations, even when the latter are attended with greater mutilation and more profound primary shock.

It may be contended that while these operations are analogous in the region in which they are performed, they are wholly unlike in that the pelvic operations are carried out on patients who are much younger than those upon whom prostatectomy is done; also that with the pelvic cases there is a more accurate haemostasis. I think one must admit that the element of age is in favor of the patients upon whom

the pelvic operations are done; also that it is true that in most instances there is a more definite haemostasis in the pelvic cases; but even when all these points are taken into consideration, I believe there is still a disproportionate mortality and also a much stormier convalescence after prostatectomy than these elements satisfactorily account for. Besides this, there is a treacherousness about prostatectomy that is rarely seen in the other condition. Some of the prostatectomy cases, who are apparently the best risks, die of vague and more or less ill defined conditions, sometimes considered hemorrhage, though the bleeding is no greater than that seen in cases apparently similar, that make a good recovery: sometimes the death is considered due to shock, though these patients are often in fair condition immediately following operation and the shock develops only slowly, death following in from three to five days after operation.

All these things would seem to point to the probability that the mortality in these prostatic operations depends upon some factor other than the trauma produced by operation. Formerly it was held that different types of operative technique would do away with the high mortality, and many were the modifications that were proposed to diminish the shock, control hemorrhage, etc. These modifications improved the results of the individuals who suggested them, but did not prove of great use in the hands of the general public; demonstrating, to my mind, that these modifications were not really of fundamental importance, as regards their life-saving character, but simply that the men who proposed them and who, as a rule, had had a considerable experience with such cases, had unconsciously developed an intuitive knack for making these patients do better; that they did not appreciate upon what this depended and were, therefore, incapable of imparting it to others; that the various refinements of technique had to do with the betterment of the end results in the hands of the general public rather than the improvement of their mortality. In other words, that the cause of the mortality was more deep-lying than the mere operative technique and depended upon some element which we were not accustomed to deal with in general surgical problems.

In looking for the respect in which these patients differed from ordinary general surgical patients, it was found that the element almost invariably present—especially in cases that did badly—was a residual urine, often a very considerable one, and it began to appear as though the important element which we were over-looking in the care of these cases must be related in some way to this condition.

Between five and six years ago, the probability of this was brought home to me forcibly. At this time I had under my care, within a very short period, two patients suffering with prostatic obstruction with over-distended bladders. Their condition was so poor that it was obviously impossible to do an immediate prostatectomy. One, who had a very light-colored, but not infected urine, was catheterized; at first intermittently, later by an in-lying catheter. This procedure was carried out with the greatest care it was possible for me to observe. In spite of every precaution, he became infected, went down hill and died. In the last days of his life, this man developed the dry tongue, hiccough, slightly distended abdomen, nausea, mental dullness, bloody and diminished urine that I had so often seen in fatal cases following prostatectomy. The second patient was a man who had been catheterized for some little time before I saw him. His urine was bloody and foul; he had a temperature and was evidently thoroughly infected. His bladder was opened suprapubically under ether. He died within about twenty-four hours. Although both these patients presented the signs so often seen in fatal post-operative prostatic cases it was perfectly evident they had died, not of prostatectomy, but of kidney infection.

These cases raised in my mind the probability that much of the mortality that we had supposed to be due to some particular risk inherent to the removal of the prostate, must be laid to the renal element that entered into the problem and that this was in some way connected with the presence of a residual urine. Further observation showed that the patients who died or who had stormy convalescences, almost without exception presented a considerable amount of residual urine; that usually the urine was light in specific gravity and low in solids. It was noted that in some of these cases the urine was uninfected. These, at first sight, seemed to be in especially favorable condition, though it was found that they did particularly badly. In others the urine was infected and one would say off-hand that they were less favorable for operative procedure; but further observation demonstrated the surprising fact that the patients with infected bladders were distinctly better risks than the patients who presented non-infected bladders. At this time, I formulated the working hypothesis that the danger in prostatectomy was almost entirely dependent upon the renal function; that the presence of any considerable amount of residual urine seriously interfered with this; that surgical attacks upon the prostate itself were not attended with any especial or peculiar danger, and that the minute one could

relieve the kidney of certain baleful effects that often went hand in hand with the prostatic obstruction, he could get the mortality down from a very considerable one to a very small one.

As a proof of the accuracy of this hypothesis,—I was able, applying this principle, to reduce my mortality following prostatectomy from that was considerable to one that was small, averaging in different series about 4% or 5%, this including operations on both benign and malignant prostates, also operations done by both the perineal and suprapubic routes. I have done a series of about forty consecutive cases on one or two occasions, without a death. I do not believe that this is due to chance, but to the fact that the principle used in these cases was the correct one as far as the lessening of mortality is concerned.

In my belief the great element of danger in prostatectomy lies, not in the operation itself, but in the fact that we have to perform these operations upon people whose kidney function, (a very vital process), has been seriously impaired. This impairment is due to back pressure brought about by the presence of residual urine. It occurs under two general types. First, we have the aseptic cases, the ones where the urine is perfectly transparent, of very low gravity, poor in solids. In some of these cases there is a definite dilatation of the ureter with dilatation of the kidney pelvis and backing up of urine on the kidney; in other instances no dilatation of the ureter or kidney is noticeable and the back pressure seems to take place through a normal or pretty nearly normal ureter. Often these patients, due to lack of infection, do not have any considerable amount of frequency or other symptom referred to the bladder. They do have, at times, nocturnal incontinence. The symptoms from which they suffer are apt to be digestive and very frequently they present marked examples of cachexia urinaria—loss in weight, lack of appetite, distended abdomen, nausea and sometimes even vomiting. It may be, in fact, that the only signs which point to the urinary tract are objective ones,—a full bladder, as felt suprapubically, and a very light gravity urine, containing very little in the way of solids; to these may be added at times, as previously mentioned, nocturnal incontinence. It seems as though a condition of this sort may at times be wholly mechanical, depending solely upon back pressure; at least, this would seem probable from the fact that kidneys which, under this influence of back pressure, excrete a very pale, albuminous urine, poor in solids, will often show, months after operation and relief of the back pressure, a normal urine of good gravity, containing a normal

amount of solids, thus showing that the kidney is able to recuperate in a way that would seem impossible if tissue changes had taken place in it to any particular extent. I often think of this process as a temporary embarrassment of renal function. The second type is composed of cases in which we have the same element of back pressure as in aseptic cases, but with an infected urine. In these instances, there is usually, besides the element of embarrassment due to back pressure, an element of renal destruction due to the pyelitis or pyelonephritis that has taken place. In one way these cases are less dangerous than the aseptic ones; in another way they may be more so. They have the advantage of having received a certain immunity through infection, which the aseptic cases do not possess. They have the disadvantage that the suppurative process may have destroyed the renal tissue to a variable, perhaps a very considerable extent; or, if it has not actually destroyed this, it may have set in motion a suppuration which will eventually do so. It is among the cases of this type that we see patients whom it is impossible to restore to health, since their renal function is actually destroyed by infection to a degree that prevents anything more than a slight interruption in their fatal progression. In the aseptic cases, we have a condition which is capable to a greater degree of permanent recovery, in that the changes which have produced their renal incompetence are capable of great betterment, if not, indeed, almost of cure. While the possibilities for permanent improvement in these cases are greater, the danger in dealing with them at the time of operation is also much greater for this reason: these patients have, due to their back pressure, dilated pelvis and perhaps tubules, are wholly unprotected from ascending infection and are very susceptible, since they have not received the immunity possessed by the kidneys already slightly infected.

This explains in a few words what I believe to be the great danger that we have to meet in prostatectomy; that is, kidneys whose function has been seriously crippled through back pressure, sometimes with an aseptic urine, more frequently with an infected urine. The relief of back pressure is always attended with a certain amount of risk—in my opinion, with the possibility of very great risk—unless that is carried out in the proper way. Our problem is how to meet the situation with the least danger. The older way of dealing with urinary back pressure was by the use of the catheter, used either intermittently or constantly. This is still useful in certain cases. I believe, however, its use should be almost completely restricted to the cases with infected

urines. My reason is that with the normal bacterial flora of the urethra, it is utterly impossible for anyone to catheterize, over any length of time, a man who has an over-distended, atonic bladder, without producing an infection. The problem here is entirely different from the catheterizing of the patient with an acute retention due to injury or to acute disease. It compares only to those instances of repeated catheterization which we see in spinal lesions, where infection invariably takes place, first of the bladder then of the kidneys. When such an infection occurs, the limitation of that infection depends upon elements which no person can foresee or gauge; some of the elements that enter into it are the degree of dilatation of the ureter, the resistance of the patient, the virulence of the culture,—all these are elements, but they are things that we can change but little. The way which seems to me to afford the best chance of immunity from infection of the upper urinary tract in these cases of bladders that are over-distended with aseptic urine is the suprapubic opening of the over-distended bladder and the insertion of a large drainage tube, which will allow no puddling of septic urine or no intermittence of drainage and will also afford every opportunity for the dilated ureter and pelvis to contract. In other words, a two-stage operation.

This, of course, often does not offer absolute immunity from ascending renal infection, but adequate drainage, according to the sound surgical practice employed in other locations, should offer a greatly diminished probability of an ascending infection, when compared with the catheter, used either intermittently or continuously. The temporary interruption of the drainage, due to plugging of the catheter's eye or to its slipping, the mechanical urethritis that the catheter so often produces, seem to me to make infection absolutely sure and not to provide the adequate drainage that the other method produces, (adequate drainage being our best method for combating the spread of infection, no matter whether it is situated in the cellular tissues or the urinary tract). The passage of a catheter into the bladder through a trocar introduced above the pubes may be safer than the use of a catheter introduced through the urethra, but it seems to me to have no advantage over the introduction of a large suprapubic tube through an open incision made under the use of local anaesthesia, when one regards the element of shock and sepsis. It certainly has the disadvantage in the way of drainage which a small tube has over a larger one; furthermore, the employment of the larger tube has the advantage that it leaves a walled-off, granulating tract which

can be used as an avenue of approach to the prostate at the time of its removal.

My summary of the methods of relieving back pressure would be, that the **infected** cases that are sufficiently tolerant to be easily drained by catheter, should have the bad effect of kidney back pressure counteracted by the use of continuous catheter drainage; that this should be continued till the signs of renal insufficiency, due to back pressure, have disappeared. This will rarely be in less than a week and will often be much longer. Every aseptic case presenting back pressure should have his bladder opened suprapubically under local anaesthesia, a large drainage tube placed in position and left till all signs of intoxication, due to faulty renal action, have disappeared; in other words, that he have a two-stage operation. It is imperative that this cystostomy be done under local anaesthesia, else it loses its whole point;—the use of ether on kidneys that are embarrassed by aseptic back pressure invites disaster.

The question immediately arises, "Is it necessary to do this in all cases presenting urinary back pressure?" One must undoubtedly answer, "It is not." When, however, one is asked in what cases it is safe to omit this procedure, the answer must be guarded. The reason for this lies in the impossibility of estimating two things; the first is our inability to estimate the potential power of the kidneys or, to use a current phrase, the ability of the injured kidney to "come back" after the relief of back pressure. The second is our ignorance of the extent to which the kidneys will be further crippled by the progression of any infection which is already present or which may be introduced at the time of prostatectomy, in such cases as are not infected. This inability to draw definite conclusions from the various functional tests as regards these two very important points applies to all tests alike. The difficulty is that these tests simply tell us the power of the kidneys as it is at the time that the test is made. When the kidneys are hampered by back pressure the relief of this back pressure will also greatly improve kidney function. None of the functional tests has this power of clairvoyance which we need to tell us what the renal function will be when the kidney has been relieved of this embarrassment of back pressure. Furthermore, no matter how ample the margin of safety may be, as indicated by the functional tests, we cannot be sure that we may not need it all, because of the crippling which can come from the diminished renal power that follows the progression of infection introduced at the time of operation, or by the injury to renal function brought about by the irritating action of ether on the kid-

neys. This makes evident the difficulty and fallacy of accepting any arbitrary figure of kidney efficiency as the criterion as to whether one may safely attempt prostatectomy or not. It may mislead us in one of two ways: it may encourage us to operate when we should not or it may, because of the low figures of the arbitrary scale, prevent us from attempting operations which are perfectly safe. One must make his decision to operate in each case upon the findings in that individual instance. No matter how small the reading of any kidney function test is, that patient is not to be deprived of the advantages of prostatectomy, provided that he shows no sign of renal insufficiency; that is, if in addition to the excretion of a good amount of urine, he shows a clean tongue, lack of any sign of interference with digestion, the presence of which would be indicated by hiccough, nausea, vomiting or soft abdominal distension. No matter how small the renal function of such a patient is, when compared with our arbitrary scale of what it ought to be, it is sufficient for him, and will be sufficient to take him through prostatectomy, provided no extra strain is thrown upon his kidneys by the operation. It has been my good fortune to do a successful prostatectomy upon at least two people whose renal function—as established by the phenolthalin test—was under 5%. There is much that suggests that the action produced upon the kidney by drainage of the over-distended bladder is purely mechanical. However this may be, following drainage the amount of urine usually goes up, the excretion of total solids increases, the retained nitrogen comes down and the excretion of salt goes up (if there has been a salt retention). In the occasional case which shows oedema, there will be a diminution of the oedema even where the intake of fluid is greatly increased. At times the primary effect of the relief of back pressure is not so favorable, but diminishes the amount of urine. This is probably due to renal congestion that follows the release of long existing pressure and may be so marked as to amount to actual anuria. Occasionally one sees bloody urine, usually of renal origin, I believe. This is more frequently seen in cases that are already infected, and represents an exacerbation of an old pyelo-nephritis, but it may occur in the cases not previously infected and while usually of renal origin may occasionally be of bladder origin. It is very important that the amount of urine excreted be carefully watched for the first three or four days after the establishment of bladder drainage and the release of the kidneys from the ill effects of back pressure, whether this is done by catheter or by suprapubic incision with prostatectomy. The first suggestion of any diminution in the amount

of urine should be followed by increasing the fluid intake, for even assuming that the diminution is due to a congestion of the kidneys, the increased ingestion of fluid seems to be the method to be employed in its relief, in spite of the fact that in most conditions one might draw the conclusion that rest of the congested organs would be the most rational way to restore them to function.

When, after bladder drainage, the amount of urine goes down, water should be pushed by mouth. Where the patient's stomach will stand it, a tumbler of water per hour is desirable. Where this is not tolerated, salt solution should be given by rectum. It may be used by either the continuous method or by giving six to eight ounces every few hours. When we fail by both these means to introduce enough water to keep the amount of urine up, it is necessary to resort to subcutaneous infusion of salt solution. This can be given in much greater amounts than most people appreciate. I do not hesitate to give 750 cc. three or even four times in twenty-four hours for as long a time as this seems necessary. On one occasion, I gave a patient twenty consecutive subcutaneous infusions of 750 cc. of salt solution at eight hour intervals, before I was satisfied that the man could get on without them. This man made a very good recovery, although he was unconscious for some time and even delirious for several days. I not infrequently see this patient on the street. The only contra-indication that I see to the use of salt solution is the appearance of oedema. This will ordinarily appear first in the scrotum and with its appearance I diminish the use of salt solution.

The principal drugs which I use to stimulate urinary excretion are caffeine sodium benzoate in grain doses every few hours, given by mouth or subcutaneously. This is supplemented by digitalis, if the cardiac action is not satisfactory. Getting these patients up, either in bed or, more often, out of bed, seems to be a good stimulant to their general well-being and in this way acts as a stimulant to their renal function. I rarely allow patients of this type, particularly if they seem in poor condition, to remain quietly in bed. The same procedure for stimulating renal excretion is applicable both following draining of the bladder as a preliminary to prostatectomy and also following the operation for the removal of the prostate. If, however, the two-stage operation is done and the kidneys have been gotten into a condition of equilibrium following the drainage step, it will be unusual to have a diminution of function following the enucleation, unless ether is used as an anaesthetic. In order that one may know the amount of renal excretion, our most important and

earliest indication of impending danger, it is essential that constant irrigation of the bladder following either cystostomy or prostatectomy be given up. I have for a number of years protested against this, because of my feeling that this procedure does an incalculable amount of harm, in that it prevents an accurate knowledge of the amount that the kidneys are excreting and the early adoption of adequate measures to stimulate renal action in cases where this begins to flag.

There is no arbitrary time to be placed on how long one should drain patients with urinary back pressure, before proceeding to the prostatectomy. One keeps up the drainage until the renal function is satisfactorily re-established or until the patient has made as much progress as it seems probable that he can. Where it is wise to carry out this preliminary drainage, it is seldom desirable to do the second stage of the operation under a week's time, and usually a delay of ten days or two weeks is better. I have allowed as long a time as nine weeks to elapse between the draining of the bladder and the enucleation of the prostate. However, the time which elapses should depend entirely on the patient's condition. When the patient is passing a good amount of urine, when there are no signs of indigestion, the tongue is clean, the abdomen not distended, one may assume that the patient's renal function has become re-established.

I should like to call attention here to the importance of soft abdominal distension as a sign of renal insufficiency. I believe it is an important sign of toxemia, due to faulty renal action, and has less general recognition than it should have.

Naturally one will depend somewhat upon the sort of anaesthesia he is to use for the enucleation of the prostate as to how long an interval he allows to elapse between the establishment of drainage and the enucleation or between the first and second stages of operation. If one is to use gas and oxygen, and more particularly if one is to use spinal anaesthesia, it is admissible to operate earlier than if one is to use ether anaesthesia, which irritates the kidneys to so much greater an extent. The use of ether causes a certain amount of renal congestion that is undesirable under any circumstances; when we have kidneys impaired by severe suppuration or greatly embarrassed by back pressure, the use of ether may produce a very severe degree of renal injury, sufficient, at times, even to cause anuria and death. It should be used only when the kidneys are in good condition.

My own feeling is strongly in favor of the use of spinal anaesthesia as the routine anaesthetic to employ in enucleation of the prostate. It is especially indicated in the cases that have a narrow margin of safety and when one must

avoid anything that can possibly injure the renal function. It meets its clearest indication, perhaps, in the suprapubic cases. It has certain limitations when used in the perineal cases, in that it is undesirable to place the patient in the exaggerated lithotomy position for some little time following the injection. I have always waited fifteen or twenty minutes. This is due to the fact that this tilting of the patient may produce a higher anaesthesia than is safe, due to the gravitation upward of the novocaine, in case the pelvis is raised, before such time as the solution has been absorbed. Not only does spinal anaesthesia allow us to enucleate the prostate without adding any injury to the renal function, but it also diminishes the shock, and the lower blood pressure diminishes the tendency to hemorrhage. Its chief asset, however, is its lack of injurious action upon the kidneys.

It cannot be denied that spinal anaesthesia has its drawbacks, the deathly pallor which one occasionally sees, the toxic condition accompanied by vomiting and almost complete disappearance of the pulse is very trying. These, fortunately, are not very frequent accompaniments. The post-operative headache, which unfortunately, is not very rare, is a great annoyance. The rather smaller doses that we have been using of late and the less forcible injection seem to have lessened the number of toxic cases and diminished the uncomfortable features attending its use. From a personal experience of about one hundred prostatectomies done under spinal anaesthesia without fatality, I am convinced of the very great advantage of this form of anaesthesia in prostatic work. While the stormy cases frighten me and are extremely trying, I prefer this to the greater danger, amounting sometimes even to euthanasia, that general anaesthesia by ether produces in many prostatitis. My experience with gas-oxygen anaesthesia has been very limited. My feeling is that its danger is probably fully as great as that of spinal anaesthesia, perhaps even greater. It has seemed to me that the tendency to bleed, following enucleation under gas-oxygen anaesthesia, is decidedly greater than it is under spinal anaesthesia, but I am unqualified through lack of familiarity with gas-oxygen to compare it with spinal anaesthesia.

I recognize the fact that the cardiac condition is a considerable danger in some of these cases that undergo prostatectomy; that the general inroad made by advanced years is also a heavy handicap, though I have done a successful prostatectomy on a man of ninety; that the trauma of operation may at times be severe and attended with marked shock; the bleeding at time of operation may occasionally jeopardize

life, as may also the secondary hemorrhages that are now and then seen. These hemorrhages may, however, usually be controlled by packing the bladder by one of the several methods that have been advocated for this purpose. Sometimes a transfusion of blood is necessary when either the amount of blood lost has been very great or we have a deficiency in coagulability. It has been my experience, however, that the sum of all these dangers is not so great as the danger that arises from the lack of adequate renal preparation in the patients that are to undergo prostatectomy; that this is the important element in the treatment of these cases: the recognition of which diminishes greatly its mortality.

Analysis of 133 Fractures of Spine. J. B. Hartwell, Boston, Boston M. & S. Jour., July 12, reports on a series at the Mass. Gen. Hospital. 7 occurred in females, 126 in males. No cases were observed under 10 but the age distribution was fairly even. 83 were due to falls from a height, 25 to "jack-knife" injuries including 11 by weights, 6 by low bridges, 5 by diving, 1 each by cave-in, football and coasting injuries. 8 were due to collision with trains and 1 with automobile, 7 to direct blows, 2 to alighting from moving cars, in 7 no history was obtained. The fractures involved the cervical vertebrae in 48 cases, 7th cervical and 1st dorsal in 1, dorsal in 50, 12th dorsal and 1st lumbar in 1, lumbar in 33. The 49 cervical fracture cases involved 76 vertebrae, by lesion of two or more in a case. These included none of the first, 1 of the 2d, 7 of the 3d, 14 of the 4th, 29 of the 5th, 19 of the 6th, 6 of the 7th. The 51 dorsal cases involved 66 vertebrae, the number of each in order being as follows: 1, 3, 7, 5, 1, 2, 4, 6, 3, 9, 8, 17. The 34 lumbar cases involved 40 vertebrae, the number of each in order being: 20, 8, 1, 3, 4 and 4 unspecified. In 41 cases, other complications were noted, totaling (by combination in certain cases) 64 lesions. These included 12 fractures of the skull, 16 of ribs, with puncture of lung in 4 cases, 25 other fractures of bones, sternum, pelvic and limbs, and various visceral lesions, extensive lacerations, etc.

Rollier's Method in the Treatment of Pott's Disease. J. W. Flynn, Prescott, Ariz., S. W. Med., Oct. 1917, quotes Rollier's statistics of 198 cases: 171 completely cured, 18 improved, 5 stationary, 4 died. He pleads for the application of this method in the U. S. and considers Arizona especially available as the sun-baths can be given at all seasons and there are few sunless days. All altitudes can be had, from that of Rollier's institution down.

Skin Affections Reflecting Internal Maladies.*

By JOS. SPANGENTHAL, M. D., Buffalo.

Too often does the internist consider the Dermatologist as a specialist distinctly isolated in his chosen specialty, bearing no relationship to the other branches of their profession. The Dermatologist should be broad in his knowledge of general pathology involving internal diseases, and should become familiar with their diagnosis and treatment. Likewise should the Internist be acquainted in a superficial way at least, with the multitude of skin affections which reflect some internal disease.

This inter-relation could be more easily comprehended, if we would for a moment consider the skin as an essential organ, analogous to the lungs and the kidneys, whose physiological function is somewhat similar. Like the other organs, it is composed of connective tissue, lymphatics, nerves, blood-vessels, etc., and is subject to the same pathological changes. In the importance of its physiological function, it may be comparable to the kidneys. It excretes waste material in the form of urea and other poisonous substances, and exhales noxious gases like the lungs. This same analogy should be recognized in its pathology. We will now consider some of these skin affections.

ROSACEA: This is a quite common disease occurring in both sexes, in adult life, presenting itself on the cheeks, chin, nose, and forehead, in patches of hyperaemia in which are observed the permanently dilated capillaries. This disease is often associated in the female with uterine or gastric disorder, usually of a functional nature. In the male, Rosacea may develop into Rhinophyma, lobulated enlargement of the nose, concomitant with catarrhal gastritis occasioned by long continued over-indulgence in alcoholics.

CARBUNCLE: The knowledge that carbuncle and diabetes are so often associated in the same individual, should make one alert to examine the urine for glucose in every case presenting a carbuncle.

CHLOASMA: The term applied to increased pigmentation of the skin occurring as variously sized and shaped yellowish, brownish, or blackish patches, or more or less diffused discoloration. The symptomatic variety is observed in association with tuberculosis, sarcoma, cancer, malaria, Addison's disease, Graves' disease, and functional and organic diseases of the utero-ovarian system. Under this classification

*Read before the "Malmonides Club" Nov. 1917.

might be mentioned the greenish hue of chlorosis, the lemon tint of pernicious anaemia, the straw color of carcinoma, and the waxy pallor of parenchymatous nephritis.

ANIDROSIS: A functional disorder of the sweat glands characterized by diminution or suppression of the sweat secretion. This is rarely an idiopathic condition, but it occurs in certain systemic diseases especially diabetes.

ERYTHEMA NODOSUM: This is an inflammatory affection of an acute type, characterized by the formation of variously sized roundish, more or less elevated, erythematous nodes or swellings, attended with some degree of systemic disturbance. The frequently associated rheumatic symptoms observed would indicate some connection with this disease, and Curshman states that in 25 cases he met with hemorrhagic nephritis 5 times.

ERYTHEMA MULTIFORME: This may be defined as an inflammatory disease of an acute character ushered in by reddish or purplish red, often variegated macules, papules or tubercles, occasionally becoming vesicular or bullous. This disease is probably of an infectious nature, and there are not infrequently associated rheumatic symptoms; in fact articular rheumatism may follow an attack of this disease. Apropos, the following case will illustrate this. W. E., aet. 30, was taken ill with acute follicular tonsillitis ushered in with high temperature and systemic disturbance. The following day his face, arms, and trunk were covered with eruption of erythema multiforme, of the erythematous and papular variety. After a week's duration, the eruption disappeared, and he then suffered from a severe attack of acute articular rheumatism, in which the knee and wrist joints were involved.

DERMATITIS FACTITIA, or feigned skin eruptions. These cases are of interest, because of their appearance upon patients, usually females of a neurotic tendency, showing hysterical symptoms. They may simulate almost any skin lesion, and are often very difficult of diagnosis. Their importance in indicating some instability of the nervous system should be considered.

FURUNCULOSIS: Two factors are to be considered in this disease, essential and predisposing. Among the many predisposing causes, may be mentioned nephritis and diabetes mellitus.

HERPES ZOSTER: This disease, acutely inflammatory in nature, is characterized by the appearance of several or numerous groups of vesicles on an inflamed area, of unilateral distribution, corresponding to some cutaneous nerve. There is also present more or less neuralgic pain,

sometimes of great intensity. This pain often precedes the eruption by several days, and is due to an acute neuritis, thus exemplifying the relation between a dermatological lesion and a nerve involvement.

HYPERIDROSIS: Excessive amount of sweating in a general form, may be symptomatic of some underlying unrecognized disease such as incipient Graves' disease or tuberculosis.

NAILS: The nails as an appendage of the skin, often by their deformity as well as the diseases which affect their substance, indicate serious constitutional maladies. We are all familiar with the clubbing of the nails which is suspicious of tuberculosis. When in addition, the nails are cyanotic, we invariably find cardiac affection of congenital origin.

HAIR: Alopecia Areata and Alopecia Syphilitica are the two forms that indicate some constitutional disturbance, the former being often of neurotic origin, the latter one of the early manifestations of luetic infection.

Apropos of alopecia areata neurotica, the following case observed by the writer will be of interest. A young adult who had been under a severe business strain, suffered from this disease. Within the period of several weeks, the hair from his head, beard, eye-brows, lashes, axillae, and pubis was lost. This condition persisted for two years despite the vigorous treatment that had been applied over a period of 6 months. Several months ago the patient spent 6 weeks' vacation on a boat trip. Upon his return, he exhibited a complete recovery. This furnished strong corroboration of the neurotic theory of this disease.

PELLAGRA: This disease, of such frequency in Italy, and in our southern states, usually comes under the observation of the dermatologist. The skin manifestations for the most part appear upon the backs of the hands and forearms in the nature of a dermatitis, but the constitutional aspect is of such importance, that the skin affection per se would seem of secondary consideration. The constitutional symptoms which stand out most prominently are, malassimilation with depression, or even a psychosis in the nature of a severe melancholia with delusions. There are also present gastro-enteric symptoms of great severity.

PEMPHIGUS: An acute or chronic bullous disease of the skin, characterized by the formation of scanty or numerous variously sized blebs, which may be accompanied by mild or severe constitutional symptoms. The etiology of pemphigus

is obscure, and the prognosis often grave. I mention this malady to show the relation that exists between the skin lesion and the serious systemic infection.

PRURITUS: A functional cutaneous affection, manifesting itself solely by the presence of itching without structural alteration of the skin. Pruritus may be a distinct affection, or it may signify some other malady of which it forms one of its symptoms. The most common factors to be considered as of probable import in generalized pruritus are digestive and intestinal derangement, hepatic disorders, intestinal worms, Bright's disease, diabetes mellitus, ovarian and uterine disorders, carcinoma, and a depraved state of the nervous system. Also certain drugs, especially opium should be considered.

PURPURA: A hemorrhagic affection of the skin in which appear variously sized smooth, reddish or purplish spots or patches, not disappearing upon pressure, and accompanied by systemic disturbance of slight or severe nature. In considering the etiological factors in general, this disease may be classified as vasomotor, toxic and infectious. Those of toxic origin arise from an auto-intoxication starting in the intestinal tract, thus indicating the close relation existing between this disease and some faulty metabolism.

EXANTHEMATA: Scarlatina, Rubeola, Varicella, and Variola are constitutional diseases of infectious nature, in all of which are skin manifestations, again showing the organic correlation.

URTICARIA: The indirect or internal causes of urticaria are numerous, most of them acting through the alimentary tract. Emotional or psychic causes such as anger, fright or sudden grief will sometimes occasion an outbreak, demonstrating the effect of the sympathetic nervous system upon the skin.

XANTHOMA: A slightly elevated, flattened, or somewhat rounded, soft neo-plastic growth, of a yellowish color, usually seated as one or several lesions about the eye-lids, and occasionally of more or less general distribution. Among the etiological factors or rather associated with this disease may be mentioned jaundice; and Kaposi, Hardaway, and others are inclined to believe that the xanthoma growths are also developed in the liver.

In presenting these various skin affections, I have by no means exhausted the subject. There are many diseases of the skin of probable internal origin whose etiology is yet ob-

scure. Among these may be mentioned Dermatitis Herpetiformis, Lichen Planus, Psoriasis, some of the Eczemas, Epidermolysis Bullosum, etc.

I hope the point has been made clear, that there is constantly a correlation between that most important organ the skin, and all of the other organs.

595 Lafayette Ave.

Traumatisms and Morbidity in Troops. An anonymous surgeon, *Western Med. Rev.*, Oct., gives the following estimate and results of sanitary and hygienic training:

Table of Probable Number of Cases of Disability in an Army of 1,000,000 Men.

Diseases:	Total Cases	Cases Per 1,000
Typhoid fever	800	0.80
Paratyphoid	14,680	14.68
Measles	19,930	19.93
Scarlet fever	130	0.13
Influenza	21,340	21.34
Tuberculosis	3,890	3.89
Insanity	1,680	1.68
Appendicitis	5,990	5.99
External causes:		
Fractures	11,530	11.53
Dislocations	3,150	3.15
Gunshot wounds	1,970	1.97
Sprains	45,980	45.98
Wounds, except gunshot.....	33,950	33.95
Other external causes.....	65,390	65.39
Total all causes.....	887,800	887.80

Sunlight in the Treatment of Wounds. D. Freche, *Jour. de Med. de Bordeaux*, mentions this as a favorite at present. He concedes the bactericidal power, approximately 96% of which is due to violet and blue rays, 4% to rays at the lower end of the spectrum (calorific). But, for anthrax spores, 29-54 hours, exposure are necessary and even 83 hours if protected from the air. The bactericidal power is diminished by the presence of moisture—inevitably present in wounds,—by haemoglobin which absorbs the most active rays, and is very slight beneath the surface. Irradiation is also painful in many cases. Sunlight has a special indication in atonic wounds but even here other methods, physical or chemie, are superior. On the whole, he believes the advocates of the method are the victims of a mirage of their own creation.

Drafting of Physicians Under the Selective Service Act.

By ROBERT M. CODD, JR., B. S. M. E., LL. B.

The sovereign power or duly constituted authority of any land may in time of internal stress or foreign conflict call to its support the property, services or even the lives of its subjects.

Under the feudal system we find serfs attached to the land and the land and all of its attachments the absolute property of a feudal lord, who in turn owes his unquestioned allegiance to his sovereign.

Where this supreme power has been resumed by the people they, by that act, become masters of their property and conduct. But man is gregarious, and our present day interdependence would be impossible, had we any such individual freedom or even that of the patriarchates or family control.

When this individual freedom of action is voluntarily surrendered to promote the public good, a sovereign power is created, given certain duties and obviously the authority to enforce them, restraining individual action and thought, and even taking private property for the public welfare. The measure of this authority may be found in a Magna Charta, a Bill of Rights or a Constitution. But where it is once delegated it is all powerful, and when it speaks all must acquiesce.

For example, we find a captain of a ship at sea, in time of storm throwing overboard a part of the cargo to save the balance, which on the arrival of the vessel at its destination will not be delivered to the consignee, but will be subjected to the law of general average, or be sold in bulk and the proceeds divided pro rata among the various owners of the entire cargo. So, too, we find a fire marshal razing a building to stay the progress of a fire which has become a danger to the entire community.

What holds for property is equally good for personal services and even the lives of a people. So in the case *Johnson vs. Dodd*, in 56 New York Reports, page 81, we find it stated "The government has the right to require the personal services of its citizens for the public defense. Minors and adults and even those apprenticed are alike subject to this supreme authority."

The law martial and the court martial now succeed the codes of Civil Procedure and the usual courts for the enforcement thereof.

In the spring of 1917 Congress spoke. War was declared. Under the Public Welfare clause, so-called, and under the

implied authority that the right to declare war carried with it the right to raise armies, a National Army was provided for by the terms of the Selective Service Act. By the terms of this act, certain exemptions from compulsory military service were permitted, as employees of the Federal, State and other government officers, and others. The entire body of men, called to the colors are regarded as a part of the National Army, must report as such, when required to do so, or suffer stigma and punishment as deserters, they being subject to the law martial. If they are of one of the exempt classes they may show this by affidavits or otherwise, and the various local boards will allow the exemption.

What of the doctor? This and other occupations call for a special training, then an examination as to proficiency and a state license to practice. Should the exemption board view all applications for relief from the draft alike? The man who has devoted time and money to acquire his profession, and has received a state permit to follow it up, should he be sent to the front irrespective of his potential ability for special usefulness in his community?

The exemption boards are given semi-judicial powers. There is some question as to this delegation of the powers of courts, either civil or martial, to these boards. But it is obvious that a physician should and would receive exemption at their hands, should he hold a fatal number in the government's great lottery. This exemption on account of his calling, in a measure conscripts him to a form of public service.

Not so the man trained and who has taken a medical degree, but never followed it up by its practice. His value in any special line is extremely problematic. No exemption board could with justice excuse him from service were he drawn for such.

The act calling into being the National Army is termed Selective. Obviously the men taken are selected with reference to their duties and relations to the communities from which they come. Thus a doctor with a considerable practice would not be called, while a less fortunate and junior member of the profession might have an opportunity to gain valuable experience and be of the greatest service to his fellows by being called to the colors. Here his professional ability would be recognized and he would be set to work along the line of his abilities, for were he thus trained the military authorities would never permit him to practice with a bayonet when he could do so with a lancet.

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Military Notes.

War bread has arrived. For some time, the bread making has been simplified to a basis of plain wheat flour, a very little salt and about half the quantity of yeast used in domestic cooking and very much less "raising" than that of ordinary bakers whose aim is to produce a bread that is good when perfectly fresh but that will encourage business by becoming stale in a few hours. The appliances have also been simplified to the minimum available at the front and part of the baking has been done in clay ovens which could be extemporized anywhere, though, as a matter of convenience, most of the baking has been done in more permanent ovens. The composition of the war bread is a matter of dispute. It is, if possible, even more palatable than the white bread which is still alternated with it. So far as can be judged by the taste, it is a whole wheat bread but some claim that it contains some other cereal, corn or oats or both.

Complaints as to army rations seem to be inversely proportionate to the scale of living of the individual at home. The palatability of different masses varies considerably but, except for minor points of difference, the messes for enlisted men at a cost of a trifle less than 40 cents a day are equal to those of officers who pay from 75 cents to a dollar. The higher-priced messes, however, usually include a liberal provision for hospitality without extra charge and various incidental expenses. Some messes even have paper napkins and there are rumors of table linen at a few. Privates from wealthy families usually speak well of their messes. Those

from humble surroundings, often express the feeling that they are very inadequately nourished. Mess sergeants declare that patients eat more heartily than men on active duty and a surprisingly few patients in military hospitals require any particular selection of diet, or show any loss of appetite. The war bread was almost unanimously regarded as excellent and the consumption on the first day of its appearance was enormous.

The avoidance of waste is reasonably thorough though certain camps are compelled to destroy much theoretically valuable waste in the form of manure, tin cans, etc., on account of lack of local demand and prohibitive freight rates to points at which a commercial demand exists. Most of the real waste is due to personal carelessness which no system of control can cover perfectly. Combustible waste of all kinds is used for heating, though newspapers may be utilized indirectly for lining walls or even clothing and thus conserving calories. As an illustration of the possible limitation of waste, may be mentioned a mess feeding about 200 men, at which the actual waste of bread—plate leavings which could not be saved for dressings, puddings, etc.—weighed less than 2 pounds for an entire day.

A comparison for periods of a week, showed a difference between an attempt to conserve sugar to a degree established by regulations, and its unlimited use, of about $1/25$ pound per capita per diem.

Mental defectives, not detected by initial examinations of recruits but sorted out by expert boards from men who have shown marked aberration or who have failed to make good in several months of military training, comprise a trifle less than 1% of the total number of average troops. They include a considerable number of cases of late tertiary syphilis of the central nervous system, a few cases of genuine insanity of various types, some cases of hysteria mostly involving subconscious malingering but the great majority of this fraction of a per cent. are cases of imperfect mental development with which modern psychiatry is especially concerned.

Tuberculosis has come to have almost a special military definition. Very rarely do well developed cases pass the initial examination nor, in spite of exposure, the frequent development of severe colds and a moderate though very variable incidence of pneumonia, does tuberculosis develop in troops in cantonments in this country, in such types as are common in civil practice, either medical or surgical. Even incipient tuberculosis with marked anaemia and general weakness, is rather uncommon. From the military stand-

point, with due regard to the expected stress of trench fighting and the opportunities for infection in a terrain in which European armies with a rather high incidence of tuberculosis have operated in large numbers for three years, it has been deemed wise to weed out all with any pulmonary secretion that can be detected by the method of inspiration, complete expiration and cough. The impossibility of securing quiet for examination of large numbers of men, renders percussion of comparatively little value, although practiced rather as a method of palpation than audition. Tuberculin tests of various kinds are not employed, partly because of obvious technical difficulties, partly because of the question recently raised as to whether such reactions are genuinely specific or due to susceptibility to foreign proteins in general. Direct bacteriologic examinations are of course provided for in laboratories but these deal with a minority of cases which represent a singularly unfortunate and rare development of a more or less pardonable error on the part of examining boards. In general, there is no sputum available for examination. Thus, the cases designated as tuberculosis include many suspects and comparatively few which will not recover under favorable hygienic conditions. Pending the inevitable delay in securing their discharge from the army—granting that they are not soon restored to health—they have the advantage of abundant food, support, medical, if not necessarily medicinal, treatment and training as to precautions in their own interests and to prevent the spread of infection.

BOOK REVIEWS

Books mentioned may be inspected at and ordered through this office. So far as possible, books received in any month will be reviewed in the issue of the second month following. Pamphlets, quarterly and similar periodicals, reports, transactions, etc., will, as a rule, merely be mentioned.

Talks on Obstetrics, by Rae Thornton La Vake, M. D., Instructor in Obstetrics and Gynecology, University of Minnesota; Obstetrician in charge of the Out-Patient Obstetric Department of the University of Minnesota; Associate Attending Obstetrician and Gynecologist to the Minneapolis City Hospital; Obstetrician in charge of the Out-Patient Obstetric Department of the Wells Memorial Dispensary; Obstetrician to the Swedish and Abbott Hospitals, Minneapolis; one time Assistant Resident Obstetrician to the Sloan Hospital for Women in New York. Cloth, 157

pages. Price \$1.00. St. Louis, G. V. Mosby Company, 1917.

The author addresses himself to students and practitioners to whom he imparts in an easy, familiar style, a few precepts and observations calculated "to give a perspective that will help to establish the relative importance of certain problems." This is not a text book nor a substitute therefor. The author has done his work acceptably, giving his readers the benefit of his wide experience and advising them sanely and conservatively. The fourteen chapters cover concisely all the complications and problems that the average physician is likely to meet in his practice of obstetrics. The book is well indexed.—F. W. B.

An Intermediate Textbook of Physiological Chemistry, With Experiments, by C. J. V. Pettibone, Ph.D., Assistant Professor of Physiological Chemistry, Medical School, University of Minnesota, Minneapolis. Cloth, 328 pages, price \$2.50. St. Louis, C. V. Mosby Company, 1917.

The author intends that this textbook shall be supplemented by lectures, and used in this way it will serve the needs of advanced work as well as intermediate. It presents clearly and without tiresome details all the subjects usually included in the scope of biochemistry. Nearly half of the text is in the form of a laboratory manual covering most of the ground already treated in the didactic portion of the book. Reference to any subject is facilitated by a separate index for each division of the book, supplemented by a very select bibliography. We notice that the latest developments of this branch of chemistry are mentioned, and the student is well oriented, providing he is properly grounded in the elementary principles of chemistry. The refinements of biochemical technic, as well as the discussion of doubtful theories and other mooted questions, are wisely excluded from this text.—F. W. B.

Medical Directory of N. Y., N. J. and Conn. Published by the Medical Society of the State of N. Y., revised to Oct. 24, 1917.

This well known directory is one of the most important activities of the State Society. Its accuracy is diminished this year by the considerable number of men in military service. This is inevitable, but we trust that by next fall, it will be feasible to include a military directory. Our read-

ers are requested to report changes due to death, removal, false listing, etc., and to call the attention of men with medical degrees who are not in practice, to the special list provided to meet such cases. There are 14,421 physicians in N. Y. state, 7,968 in Greater N. Y. City, 6,453 in the rest of the state. The difference is greater than in the past. 2,792 physicians are listed for N. J. and 1,442 for Conn.

Safe-Guarding the Special Senses. Henry O. Reik, M. D., Baltimore (now Captain M. R. C.). Published by the F. A. Davis Co., 1912. 123 pages, illustrated.

As we have reviewed books 200 years old, we make no apology for referring to one off the press for several years. Military developments have made this subject one of particular importance, not only for the army itself but in the interests of the potential militia and the great army of industry. While not a technical work, it is far from being a mere lay educator, and general indications for medical and surgical treatment are included. The work would be classified as one of specialized hygiene, but is not arbitrarily limited in this direction, and it serves a purpose not met, so far as we are aware, by any other book, in quite so satisfactory a way.

A Handbook of Antiseptics. Henry Drysdale Dakin, D.Sc., F. I. C., F. R. S., and Edward Kellogg Dunham, M. D., Emeritus Professor of Pathology, University and Bellevue Hospital Medical College, Major M. R. C. Cloth, $4\frac{1}{4} \times 5\frac{3}{4}$ inches, ix + 129 pages, price \$1.25. New York, The McMillan Company, 1917.

This little handbook, easily carried in the coat pocket, brings to a focus the experiences of the Great War in the use of chemical antiseptics. It is limited to describing the preparation and use of those old and new antiseptics that have found favor with military surgeons during the past three years. While thoroughly scientific and technical it is clear and practical, equally useful in the laboratory, at the bedside, in sterilizing drinking water and disinfecting hospital ships. After a general treatment of the laws and processes of disinfection, and the choice of antiseptics, the various chemical antiseptics are taken up in detail, about one-third of the space being devoted to the chlorine antiseptics, including Dakin's solution and the preparations related closely to it. A very useful chapter presents the methods of testing antiseptics. The last chapter gives directions for

disinfection of hospital ships with hypochlorite prepared by electrolysis of sea water. A dozen blank pages are added for notes. This is just the book for a busy man.—F. W. B.

New, Old and Forgotten Remedies. Papers by many writers. Second edition. Collected and arranged by Dr. Edward Pollock Anshutz, author of "Elements of Homoeopathic Theory, Materia Medica, Practice and Pharmacy," "Guide to the Twelve Tissue Remedies," etc. 608 pages. Cloth, \$3.50 net. Philadelphia, Pa., Boericke & Tafel, 1917.

This is a book of which the founder of homoeopathy himself might have been proud. Truly, as the editor remarks, "Even some of Hahnemann's well proved remedies are practically unknown today. * * * The 'Test at the Bedside' * * * alone can determine the value of a new remedy." But this compilation shows that Hahnemann's soul is marching on even in our time, as is evidenced by the many provings of drugs "at the different homoeopathic colleges under modern conditions."

There are some 120 or more titles in the book, in alphabetic order, with a full "therapeutic and clinical index," listing many symptoms not commonly found in the literature of therapeutics, such as: anus burns, bad blood, dying babies, foul smelling body, pains beginning at head and going out at toes, itching in whiskers, and worse lying down. For each of these ills someone has named the appropriate cure, praise be to the "provings," but, unfortunately for the novice, the text does not always tell us which remedies are or should be "forgotten."

It is the province of the author to record the unusual and bizarre as well as the more conventional drugs of the *materia medica*. And so we have alfalfa, berberis, eucalyptus, ichthyol, etc., competing for recognition with such favorites as gunpowder, dog's milk, spider's venom, bacillinum, malaria officinalis, preparation of renal calculus, indol, and the saliva of the Gila monster (*Heloderma horridus*), all of which have had their provings and are still having their day. Many a foul remedy looks fair under its Latin designation, answering eloquently the poet's question "What's in a name?"

The author does not attempt to tell us how many authorities are quoted in this goodly volume. They are legion. He believes, however, that he has included in this edition "all the new remedies of value that have appeared in the past 17 years, together with those contained in the first edition (1900) now sold out." He hopes that the book "may tend to dispel in a measure the growing therapeutic nihilism,"

and so do we. The reviewer confesses that he is bothered considerably by this nihilism, and after reading the unvarnished and naive testimony of the "provers" quoted so frequently and so fully in this book, his hopes are considerably revived. Why would not a few doses of triturated cobwebs (*Tela Aranæ*) help to dispel the cobwebs in the editorial brain—although recommended specifically in 1876 for "an obstinate intermittent?"

The compiler has done his work conscientiously and faithfully. He does not speak for himself, however, except to advise the reader to "take the good and, in the current phrase of the hour, 'forget' the rest." This is all very well, but we imagine we detect a suspicion of humorous malice in his willingness to leave to the "kindly reader" the responsibility of taking and forgetting. We shall forget some of it, promptly, because the provers have not exhibited the discriminating knowledge of physiology and pathology which ought to be the common property of all medical practitioners. As for many other parts of the book we recognize that they represent an earnest search for more light on the elusive subject of therapeutics, and as such they are deserving of the study of every scientific physician.—F. W. B.

State Department of Health of New York, 36th Annual Report, Vols. 1, 2, 3, for the year of 1915.

SOCIETY MEETINGS

Erie County Medical Society. Annual meeting, Buffalo Medical College, Dec. 17. President, Dr. Irving W. Potter, called the meeting to order, and the Secretary, Dr. Franklin C. Gram, read the minutes of the previous meeting and the Council meetings, all of which were approved.

Dr. William F. Jacobs, chairman of the Committee on Membership, presented the applications of the following candidates, all of whom were separately voted upon and elected to membership:

Dr. Earl W. Thoma, Dr. Francis M. Kujawa, resident internes Buffalo General Hospital; Dr. Sergeant Price Martin, 749 Forest Avenue; Dr. Joseph Francis Shanahan, 2157 Main Street; Dr. Harold A. Patterson, 116 Goodell Street; Dr. Irving Franklin Gram, 849 Humboldt Parkway; Dr. Nathaniel Barone, resident interne, Buffalo Homoeopathic Hospital; Dr. Francis J. Butlak, 1071 Sycamore Street; Dr. Vincent S. Mancuso, 476 Front Avenue.

Reinstatement of Dr. Harry B. Pinkerton, 597 Elmwood

Avenue, Buffalo. Transfer of Dr. W. E. McChesney from Monroe County.

Treasurer Lytle presented his annual report, which showed that 692 members were in good standing at the time of making his report, and that this number would possibly be increased by a large number of members who were in arrears at the time of the report, and who will undoubtedly pay before the close of the year.

The report of the tellers, Drs. Mulford, Lytle and Reimann showed that the following were elected: Pres., Dr. George F. Cott; 1st Vice-Pres., Dr. James E. King; 2d Vice-Pres., Dr. Earl B. Lothrop; Sec., Dr. Franklin C. Gram; Treas., Dr. Albert T. Lytle; Censors, Drs. John D. Bonnar, Francis E. Fronczak, Arthur G. Bennett, Archibald D. Carpenter, Frank A. Valente. Chairman Committee on Legislation, Dr. Harvey B. Gaylord; Chairman Committee on Public Health, Dr. Nelson G. Russell; Chairman Committee on Membership, Dr. William F. Jacobs; Chairman Committee on Economics, Dr. John V. Woodruff. Delegates to the State Society: Drs. Arthur G. Bennett, George F. Cott, Julius Richter, Franklin W. Barrows. Delegates holding over for 1918: Drs. Grover W. Wende, Harry R. Trick, Arthur W. Burd, Irving W. Potter, Charles G. Stockton.

Dr. Woodruff submitted his annual report as Chairman of the Committee on Economics. This report contained the following recommendations:

1. That the by-laws of the New York State Medical Society be changed or amended so as to give the county societies the right to home rule in order that they may regulate their own affairs in accordance with their special needs and requirements.

2. That our Committee on Legislation be instructed to use its utmost endeavors to have the Compensation Law so amended that the individual employee may have the inalienable right vouchsafed him by the Constitution to choose his own medical or surgical attendant without let or hindrance from the employer.

On motion of Dr. Rochester the report was received and the recommendations contained therein adopted.

Dr. Thomas H. McKee, Chairman of the committee appointed to visit the various Medical Societies within the county to discuss with them the subject of increasing medical fees to meet present economic conditions, reported progress and asked for the continuation of his committee. The report was accepted and the committee continued.

Dr. John D. Bonnar, Chairman of the Board of Censors, submitted his annual report giving a detailed account of the

work performed by this board during the year. The report was accepted and the financial statement contained therein was referred to the council for audit.

Dr. Clayton W. Greene, secretary of the Erie County Milk Commission, submitted the annual report of the commission.

Dr. Franklin W. Barrows, Chairman of the special committee on the Akron Home for Feeble Minded, made a verbal report for this committee.

The resolutions adopted by the Auburn Academy of Medicine, relative to the repeal of the State Narcotic Law, were read by the secretary, and on motion of Dr. Woodruff were endorsed by the society.

On motion of Dr. Gram the president was requested to appoint a committee of three to draw up a suitable statement, which would express the views of the society, relative to the State Narcotic Law and its repeal.

Treasurer Lytle stated that at a previous meeting of the society the question of remitting dues of members who had gone to the front had been referred to the council with power. This would affect approximately 135 members, who were thus far known to be in the service of the U. S., and this number would undoubtedly be greater by next year. This question had been seriously considered by the council, and a recommendation had been adopted requesting the State Society to suspend the state dues of all members who had gone to the front, and to continue such suspension during the continuance of the war. At a meeting of the State Council this question had been considered, and it was determined that under the by-laws the State Council had no right to suspend this by-law, and that it would require action by the House of Delegates at the next meeting of the State Society. However, the council had taken action which would continue in good standing those members who are in arrears with their dues.

Dr. Irving W. Potter then delivered a brief address as the retiring president, in which he thanked the members, officers and various committees for their splendid cooperation during the year, and then introduced the newly elected president, Dr. George F. Cott, who made a brief speech thanking the society for the honor, and outlined his policy for the coming year.—Franklin C. Gram, Secretary.

The Gross Medical Club held its bi-monthly meeting at the Hotel Statler, Buffalo, Dec. 21, Dr. Jas. E. King, President, acting as host. The paper "Inflammation in the female pelvis due to infection from without," was read by Dr. J. Henry Dowd, and will be published in a later issue. The

paper was discussed by all members present, the consensus of opinion being, remove all sources of infection in the male before allowing them to marry or resume sexual relations, and infections in the female would be reduced to the minimum.

Dr. Irving Potter reported two most interesting cases of placenta previa. In one he was called in consultation early and performed Caesarian section at once, saving both mother and child. In the other he was not called for 24 hours after haemorrhage had started; operation was done at once but both mother and child died.

Dinner was served in the main dining room, there being 37 present.

American Congress on Internal Medicine, second scientific session was held in Pittsburgh, Pa., on December 27 and 28, 1917. The following papers were read: Dr. Charles D. Aaron, Detroit, Roentgenology and the Internist; Major George C. Johnston, Pittsburgh, The Roentgen Rays in the Diagnosis of Diseases of the Thoracic Cavity; Dr. William A. Evans, Detroit, Roentgen Ray Diagnosis of Abdominal Diseases; Dr. Russell H. Boggs, Pittsburgh, The Value of the Roentgen Ray and Radium in the Treatment of Internal Disease; Dr. William H. Park, New York, The Communicable Diseases in Modern Warfare and their Prevention; Dr. Frank Smithies, Chicago, The Relationship of Infection in the Production of so-called Pernicious Anemia and its Significance with respect to Treatment; Dr. Edward E. Cornwall, Brooklyn, Some Problems of Cardio-Vascular Disease.

TOPICS OF PUBLIC INTEREST

Automobile Accidents. In N. Y. State in 1917 837 persons were killed by automobiles, as against 729 in 1916 and 455 in 1912. Grade crossing accidents killed 98, as against 82 in 1916 and 122 in 1915.

Sugar Consumption. The Dept. of Agriculture estimates the net retention of sugar in this country, corresponding approximately to consumption, as follows: 1914, 3,925,801 long tons; 1915, 3,851,327; 1916, 3,553,733; 1917, 3,777,640. Considering the recent shortage and efforts to control hoarding, it appears that the actual consumption must have increased somewhat by the depletion of what was an abundant reserve. Whether this increase is proportionate to that of the population or not, is difficult to decide, but it is doubtful whether,

since the falling off of immigration, the population has increased more than 1% per annum.

The Salamanca Hospital opened its new extension Dec. 28. The cost was \$9,800 for building and \$3,300 for furniture and equipment.

Lease of Hotels and Sanitariums for Hospitals. The Glen Springs at Watkins and the Jackson Health Resort at Dansville have been leased by the U. S. Government, and the International and Cataract Hotels at Niagara Falls are under consideration.

British Casualties for December included 1,145 officers and 14,805 enlisted men, total 15,950, killed. The wounded or missing included 3,342 officers and 60,335 enlisted men, total 63,677. It will be noted that the ratio of total losses to deaths is about 4:1, the experience of most earlier wars. It is impossible to calculate the proportionate losses, but if, as has been stated, England has 4 million men in the service, the deaths are much higher than has previously been stated, approximately 4:1,000 per year for the ages 20-30.

Physical Defects in Those Subject to Draft. Rejections are said to range from 30 to 70% for physical reasons, and experience of the past has shown that many have passed the examining boards who are later weeded out. This is a matter that should cause alarm—or explanation.

The Will of Dr. Ramon Guiteras provides for various philanthropies in sums of \$5,000-\$10,000. One of the most interesting bequests is that of \$10,000 to a protegee, Lenoncio Campuzana, providing he take the name Ramon Guiteras.

Death of Obese Celebrity. Jim Simon, a negro, died in Philadelphia Dec. 28. He weighed 800 pounds and was said to be the heaviest man in the world.

Female Nurses, long known in armies and given an official status as trained nurses in the Spanish War, are now introduced for the first time into the American Navy. They will be placed on the hospital ships *Comfort* and *Mercey*, formerly known as the *Havana* and the *Saratoga* of the Ward line.

The J. N. Adam Memorial Hospital at Perrysburg is to be enlarged at an expense of \$15,000. About 60 patients are on the waiting list.

The Livingston Co. Tuberculosis Hospital will be erected at Geneseo at a cost of about \$19,000, utilizing a site and certain buildings already owned by the county.

Second Lieutenants in the U. S. Army (not represented in the Medical Corps) will hereafter be recognized by a single shoulder bar on the uniform coat and a loop of braid on the overcoat sleeve, instead of leather puttees and certain differences in the tailoring of garments as heretofore. The insignia are exactly the same as for first lieutenant, but are of gold and brown, respectively, instead of silver or black. The analogy to the oak leaves of major and lieutenant colonel is followed.

Products of U. S. 1917. Gasoline 70 million barrels as against 35 millions in 1914. Petroleum 300 million barrels. Coal 550 million tons. Corn 3 billion bushels (600 million over last year).

Government Loans. The attention of our readers is directed to the need of further investment in Liberty Bonds, as they are announced. The war cost is too enormous to be borne entirely on the pay as you enter plan and the Bonds afford a means of automatically adjusting the time and distribution of the cost as equably as possible. By affording also an absolutely safe investment, they prevent individual losses of capital, discourage the waste of energy of promoters and thus help to conserve the wherewithal with which the war must ultimately be paid for. For the very large proportion of persons who have so small savings that no safe investment except the bank is available and for the small number of persons who have great wealth but not the capacity or inclination to engage in active business, so that bonds of a low interest rate—at least on the purchase price—are about the only path open. Liberty Bonds at 4% involve no sacrifice at all.

War Savings Certificates are a slightly different form of government loan, still more convenient for providing for small investments and especially for those who have comparably little to invest at a time. They are, so to speak, automatic savings banks, paying 4% compounded quarterly. The certificates become obligations when 20 five-dollar stamps are attached. These stamps have a par value of \$5 on Jan. 1, 1925, will be sold for \$4.12 in Jan. 1918 and at an increase of 1 cent a month up to \$4.23 for Dec. 1918. There will be abundant information as to where the stamps can be purchased. The certificates can be registered to insure

against loss, at any post office down to the third class and will be non-taxable, except for inheritance and income.

Industrial Casualties. Geo. E. Barton, an authority on re-education after disability, states that 35,000 deaths and 700,000 disabilities sufficiently severe to cause incapacity for over 4 weeks, occur in this country annually. So far as can be estimated from British statistics, the deaths are about what would be expected in an army of a million in about six months.

Hysteric Gaits. The complaint of muscular and joint pains, usually with, sometimes without some form of limp, has always been a source of embarrassment to army surgeons. The various conditions popularly called rheumatism and even classified imperfectly and awaiting full elucidation by the medical profession, the results of exposure and of the various strains of drilling, minor accidents, etc., certainly do produce pain and disability of various parts of the body. For example a surgeon knows that he experienced such pain and disability himself for weeks, honestly feared that it would prevent him from assuming military service, but fortunately found that it disappeared after being exposed in a mitigated degree to the same hardships as a private. After such an experience, he cannot deny the genuineness of a complaint of backache or assert that a limp is assumed to escape military service. Even without personal experience, civil practice convinces all of the genuineness of similar troubles. Yet, as a military surgeon, one is equally certain that the number of cases complaining along similar lines includes many malingerers or those who have developed hysteria, past the degree of frank faking of a disability. In some cases, the gait is sufficiently characteristic to show that it has been assumed, either consciously or subconsciously. A genuine lameness is, as one neurologist well expressed it, simple and easy whereas an assumed gait is something bizarre and difficult. For example, one case—probably malingerer only subconsciously—developed a gait that, at a distance suggested that an examining board had passed a man with congenital dislocation of a hip, and that, closely studied, especially in mounting a step, was an impossibly complicated projectile limp.

Medical College Merge. Bennett and the Chicago Colleges have united to form the medical department of Loyola University of Chicago, with Dr. Lawrence Ryan Dean and Dr. G. E. Wyneken Secretary.

A Special Course for Health Officers has been instituted at the University of Buffalo, including lectures on communicable diseases, milk and food inspection, etc. The health officers of western N. Y. are attending in gratifying numbers and will receive a certificate on the passing of an examination.

Naval Hospital Construction. Work has progressed to a considerable degree or has been completed, under an appropriation of four million dollars, providing for construction as follows: Portsmouth, N. H., 9 buildings; Newport, R. I., 13; League Island Navy Yard, 24; Norfolk, Va., 20; Charleston, S. C., 24; Pensacola, Fla., 24. Various other buildings are covered by an additional appropriation of $1\frac{1}{2}$ million.

Morbidity and Mortality Rates at Encampments in the U. S. These show a most surprising range, from about 9:1000 to 167:1000 for weekly morbidity and from zero to 71 for the weekly deaths for a division of about 25,000 men. The rates are due mainly to pneumonia which, in spite of its well recognized status as an infection, seems to depend largely on exposure and insufficient clothing, although meningitis has in a few instances occurred as an epidemic but never to the degree of producing an excessively high morbidity or mortality rate for a division. Considerable local differences, not approaching the high rates, have also been due to a purely accidental concurrence of septicaemia, traumatic fatalities, and fluctuations in various infectious and other diseases, as might be expected in civil practice. Incidentally, it is well to remember that men of military age would have an annual death rate of about 5:1000 per annum in peace conditions, or about $2\frac{1}{2}$ a week for a division of 25,000.

Use of Grain for Distilled Spirits. A recent government regulation limits distillers after Jan. 1, 1918, to the use of corn of inferior quality (below Federal Grade No. 6), except that malted barley or rye may be used for the conversion of starch.

British Casualties, for November, totaled 120,089; 1,152 deaths of officers and 24,292 of men; 3,537 wounded or missing officers, 91,108 men. It will be noted that, in spite of the changed conditions of warfare, we have almost the same ratio (1:4-1:5) between deaths and total casualties, as in past wars.

The U. S. Marine Hospital (Public Health Service) of Buf-

falo, accommodating 50 patients and thoroughly equipped for X-ray work, major surgery and refined diagnostic methods, has been extended in scope so as to be available for all branches of the federal service.

Plans for a New Tuberculous Hospital for Livingston County have been ordered. The buildings will be completed before the end of 1918 and will cost \$19,000. The site is in Leicester, adjoining Genesee on the southwest and adjacent to the famous White Woman Spring.

U. B. Squad in Navy Reserve. Thirty-five students from the dental and medical department of the University of Buffalo have enlisted in the Naval Reserve. All of the recruits are of draft age.

Children's Hospital Opened by Red Cross in France. The hospital has 70 beds and is already overcrowded with diphtheria, measles, scarlet fever and whooping cough cases. In the first week of the American Dispensary over 2,400 children were examined, more than 1,900 being between 3 to 13 years.

The Surgeon General has recommended instruction of cooks, mess sergeants and mess officers in the National Guard Camps. Instruction will be given in food values, in balancing of meats and methods of cooking and serving meals.

The Army Nurse Corps now numbers 3,800. About 10 times this number will be required for an army of 1,500,000. The salaries are from \$50 upward, with maintenance. Experience has already shown the superiority of trained female nurses over the male hospital corps. As soon as the nurses needed for active service are recruited, a reserve of 100 will be established with headquarters at Lakewood, N. J., where the Lakewood Hotel has been leased for use as a general hospital.

OBITUARY

Mrs. Mary Alice Frost, nee Laverack, widow of Dr. Henry C. Frost of Buffalo, died Dec. 23.

Dr. Andrew Taylor Still, the founder of osteopathy, died Dec. 13, aged 89. Born in Philadelphia, he became a resident of Kansas before the Civil War, was elected to the legislature in 1859 on an anti-slavery platform and served in the war as

a surgeon of the Union Army, reaching the rank of Major. He was a friend of John Brown. He broke away from regular medicine in 1874 and established the first school of osteopathy in 1892.

Dr. Morris N. Bemus of Jamestown died Dec. 7, age 55 years, after an illness of ten days. Dr. Bemus was the son of the late Dr. William P. Bemus, a pioneer physician of the county. He made application to join the medical staff of the National Army but was not accepted on account of age, although he passed a perfect physical examination.

Dr. William V. Blighton of North Tonawanda died Dec. 16, after a lingering illness. He was born at Varysburg, Sept. 16, 1837. He entered Columbia College and later graduated from Greene Co. Homeopathic College. He practiced medicine until 1874 when he was called to the ministry of the Methodist Episcopal church. He returned to the practice of medicine in 1874 when he moved to North Tonawanda and practiced there until his death.

Dr. Eugene B. Nash, Cortland, N. Y., died Nov. 6, age 79. He was graduated from the Homeopathic College, Cleveland in 1874. He was formerly professor of materia medica in the New York Homeopathic Medical College.

Dr. George A. Bachmann, Rochester, died Nov. 21, age 49, from heart disease. He graduated from the New York Homeopathic Medical College in 1892.

Dr. Andrew Kamerling, Buffalo, died Dec. 6, age 78. He graduated from the University of Buffalo in 1866.

Dr. Wm. E. Marshall, (college and date to be supplied in proof), died Jan. 6 at Cobourg, Ont. He was formerly a resident of Buffalo.

The Jour. of the A. M. A. noted the deaths of 2,300 physicians in the U. S. and Canada during 1917, estimated at 14.37:1000. The average annual mortality of 1902-1917 was 15.53:1000. Deaths occurred at all ages from 21 to 100, the maximum for any one age being 63 at 61. The average age at death was $59\frac{3}{4}$, for the whole period, $60\frac{3}{4}$ for 1917. The average period of practice was 31 years $2\frac{1}{3}$ months for the whole period, 32 years 7 months for 1917. The principal causes of death were: senility 388, heart disease 202, cerebral haemorrhage 195, pneumonia 189, accidents 111, nephritis 86,

surgical operation 66, tuberculosis 44 (less than 2% of the total), suicide 31. Homicide caused 16 deaths. Of the accidental deaths, 41 were due directly to automobiles and 9 to automobiles struck by trains at crossings. It will be noted that the present editor's estimate that 2% of all physicians died from automobile accidents was exceeded.

Dr. Ellis W. Storms, (college and date to be supplied in proof), died during the night of Jan. 8-9 at his home in Falconer. He was 50 years old and had apparently been in perfect health. Death is ascribed to cerebral haemorrhage. He had served as principal of the Ellington High School, as supervisor of the town of Cherry Creek and was for some years coroner of Chautauqua Co.

Dr. Charles H. North, Buffalo 1898, died in the discharge of duty at the Dannemora State Hospital for Insane Felons, Dec. 12, aged 49, being stabbed by one of the inmates.

Dr. Charles S. Payne, Buffalo 1884, died at his home in Liberty, Dec. 12, from cerebral haemorrhage, aged 57.

Dr. Andrew Kamerling, Buffalo 1866, died at his home in Buffalo, Dec. 6, aged 78.

Dr. Frank E. Burdick, Syracuse 1895, died at his home in Providence, R. I., Dec. 26, of heart disease, aged 46.

Dr. Charles E. Annabel, N. Y. University 1871, died at his home in Waverly, Dec. 20, from pneumonia, aged 66. He was a member of the staff of the Elmira Medical and Surgical Institute.

MILITARY PERSONALS

To Army Medical School, Washington, D. C., Major Frederick N. Jerauld, Niagara Falls.

To Boston, Mass., Lieut. Walter J. Smith, Waterville.

To Camp Cody, Deming, N. M., Lieut. Leon H. Prior.

To Camp Devens, Ayer, Mass., Lieut. Albert Bowen, Rochester.

To Camp Greene, Charlotte, N. C., Major W. Brewer, Geneva.

To Camp Meade, Annapolis Junction, Md., Lieut. Lee A. Hadley, Syracuse.

To Camp Wheeler, Macon, Ga., Lieut. Maxwell K. Wiloughby, Auburn.

To Fort Riley, Kan., Capt. Robert King, Buffalo.

To New York City, Lieuts. Ira W. Livermore, Gowanda; Chas. Jennings, Elmira; Michael Schultz, Astoria.

To Philadelphia, Pa., Capt. Harry B. Huver, Williamsville; Lieut. Alexander L. Smith, Rochester.

To Camp Custer, Battle Creek, Mich., Capt. Lynn S. Beals, Buffalo.

To Camp Upton, L. I., Capt. Max Einhorn, New York City.

To Fort Ogelthorpe, Ga., Capt. William B. Reid, Rome; Lieuts. John H. Watson, Joseph L. Wozniak, Buffalo; Frederick B. Bond, Prattsburg.

To Fort Sill, Okla., Lieut. Edwin S. Ingersoll, Rochester.

Lt. Benj. J. Slater of Rochester, to Army Med. School, Washington, from Camp Lee.

Lt. Edward F. Meister of Buffalo, to Aviation Section at Buffalo, to examine recruits.

Capt. Chas. E. Long of Buffalo, to Camp Hancock, Augusta, Ga., motor mechanic regiments, from Camp Sheridan, Ala.

Lt. Edmund B. Spaeth of Elmira, to Base Hospital, Camp Meade, Md.

Lt. A. C. Smith of Elmira, to Ft. Oglethorpe, Ga., for instruction.

Lt. Francis J. Haley of Buffalo, to Ft. Porter with Hospital Unit F.

Capt. C. K. Haskell of Rochester, to N. Y. Post-Graduate Medical School for instruction.

Capt. Roland O. Meisenbach of Buffalo to the Base Hospital, Camp Lee, Petersburg, Va.

Lt. Raymond J. DeVine, Syracuse, to Ft. Foster, N. Y., for duty.

Major Edward A. Southall of Buffalo to Ft. Oglethorpe, for instruction.

Lt. Geo. E. Stevenson of Himrods to Ft. Slocum, N. Y., for duty, from Ft. Ethan Allen.

Lt. Geo. B. Ubel of Salamanca, to Washington University, St. Louis, for instruction in Urology, from Camp Jackson.

Dr. Cyril G. Hutchinson of the British and Canadian Recruiting Mission has been transferred from duty at Buffalo to Rochester. He is succeeded by Capt. R. F. Kee, R. A. M. C., who has seen active service on the western front and at Gallipoli.

Capt. Harry B. Huver of Williamsville has been transferred from the Evans Dental Inst. at Philadelphia to the Base Hospital at Camp Jackson, Columbia, S. C.

Lt. A. H. Vogt of Buffalo to Camp McClellan, Anniston, Ala.

Lt. John C. Brady of Buffalo, to Ft. McPherson, Ga., Hospital Unit H.

Lt. Vernon L. Bishop of Livonia to Camp Lewis, Wash., as sanitary inspector.

Capt. S. A. Mahady of Utica to Camp Meade, Annapolis Junction, for duty in Base Hospital.

Capt. Raymond C. Conklin, Buffalo, to Base Hospital, Camp Taylor, Louisville, Ky.

Lt. Geo. B. Ubel of Salamanca, to Ft. Logan H. Roots, Ark., for temporary duty.

Lts. L. M. Belzer, Buffalo, Guy Granger of Sherman, to Ft. Oglethorpe, Ga., for instruction.

Lts. Peter J. Barone of Buffalo and Geo. K. Smith of Syracuse, to Hoboken, N. J.

Lt. Otto E. Utzinger of Ithaca, to University of Pa., for instruction.

Lts. Theron B. Bond of Cuba and J. A. Murphy of Buffalo, to Rochester, Minn., for instruction.

Lt. Ralph E. Robinson of Belmont, to Rockefeller Inst., for instruction.

Lt. Paul E. Betowski of Bath, to San Antonio, Tex.

PERSONAL

Dr. A. F. Soch of Fredonia narrowly escaped serious injury when his auto skidded into a Valley Branch train which was crossing the main street of the town.

The "Nurse" has been taken over by the "Trained Nurse and Hospital Review" beginning with the December issue.

Dr. Jacob E. Helwig of N. Tonawanda has succeeded Dr. Henry Smoyer as Health Officer of the town of Wheatfield, Dr. Smoyer having recently left for Porto Rico.

Dr. M. E. Babcock of Bath, (Univ. of Buffalo 1884), has had a series of misfortunes. On Oct. 26, late at night, he was knocked down by an auto and rendered unconscious, requiring treatment at the Bath Hospital before being removed to his home. Just as he was able to begin work again, he contracted diphtheria from a patient on Nov. 8, and was not released from quarantine till Dec. 28. He is still lame from his first accident, though no bones were broken and has not fully recovered from the combined shock of the accident and the infection. Dr. Babcock has our sincere sympathy and best wishes for a rapid recovery.

Dr. Hideo Noguchi of N. Y. was operated on for appendicitis, Dec. 19.

Dr. B. D. Dhedd of Arcade has been elected junior warden of the local Masonic chapter.

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Number 8

Buffalo Medical Journal

Established 1845 by **AUSTIN FLINT, M. D.****EDITOR AND PUBLISHER:****L. BENEDICT, A.M., M.D.,** 228 Summer Street, Buffalo, N. Y.**ASSOCIATE EDITORS:****New York State:**

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BUFFALO MEDICAL JOURNAL

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ORIGINAL ARTICLES

The right is reserved to decline papers not dealing with practical medical and surgical subjects, and such as might offend or fail to interest readers. Contributors are solely responsible for opinions, methods of expression and revision of proof.

Appendicitis Complicating Pregnancy

By AIMÉ PAUL HEINECK, M. D.,

Professor of Surgery, Chicago College of Medicine and
Surgery, Chicago.

Appendicitis attacks all ages and both sexes. Though distinctly a surgical disease, it is also of great practical interest to gynecologists, obstetricians and general practitioners.

The frequency of appendicitis in the female pregnant or non-pregnant is under-estimated and its significance not fully appreciated. It is often over-looked, misdiagnosed and therefore improperly treated. The autopsy findings often bring the first intimation of the true cause of the clinical picture.

To serve our fellow practitioners, we collected, analyzed and studied the original reports of all the operated cases of appendicitis occurring during pregnancy, that are to be found in the French, English and German medical literature from 1900 to 1915, inclusive, and also some unpublished personal cases. Cases reported with insufficient data were not considered.

The subject will be discussed under the following sub-heads:

1. Incidence.
2. Etiology.
3. Combined appendicitis and extra-uterine pregnancy.
4. Pathology.
5. Coexisting conditions.
Influence of pregnancy upon appendicitis.
Influence of appendicitis upon pregnancy.

6. Diagnosis.
7. Differential diagnosis.
 - (a) Maternal.
 - (b) Fetal.
8. Prognosis.
9. Treatment.
 - (a) Prophylaxis.
 - (b) Indication for operation.
 - (c) Operative.
10. Post operative sequelae.
11. Summary.

INCIDENCE.

During the child bearing age, woman is at no time exempt from attacks of appendicitis. In forty-six of our selected cases, the age is not stated. The remaining patients were at time of operation:

Under 18 years	3 cases
18-20 years inclusive	13 cases
21-25 years inclusive	33 cases
26-30 years inclusive	42 cases
31-35 years inclusive	23 cases
36-40 years inclusive	12 cases

One patient forty-two years.

The condition occurs in primiparae and multiparae; in first early and late pregnancies; in single and twin pregnancies. Appendicitis can coexist with other disease processes to which it may be primary, secondary or coincidental.

In the cases forming the basis of this article, there are noted thirty primiparae, twenty deutiparae, thirty-seven multiparae.

The number of previous pregnancies if there were any, is not stated in eighty-three cases. Appendicitis occurs at all periods of gestation. In some cases, the disease antedated pregnancy; some cases were operated early with reference to onset of symptoms; some late. It is recorded that operation was indicated and performed:

During the first three months of gestation....	40 times
From 4-6 months, inclusive	60 times
From 7-9 months, inclusive	28 times
Period of gestation not stated	45 times

ETIOLOGY.

The etiology of appendicitis in a pregnant woman is the etiology of appendicitis in the non-pregnant woman. It is the belief of many clinicians that gestation does not exert any influence, good or bad, upon the normal appendix.

Appendicitis is primary or secondary; it may be secondary

to disease of the uterine adnexa just as inflammatory diseases of the tube and ovary may be secondary to an appendicitis. Recurrent attacks of appendicitis may be precipitated by pregnancy, labor or puerperium. Pregnancy can provoke acute inflammatory disturbances in an appendix bound down by dense adhesions or containing a foreign body, one or more fecal concretions, or worms. The appendicitis complicating pregnancy may be the patient's first attack. It may have been preceded by one, two, three, or more attacks of greater or less severity.

COMBINED APPENDICITIS AND EXTRA UTERINE-PREGNANCY.

In some of the reported cases in which appendicitis and ectopic pregnancy were associated, it was not determined which of the two conditions antedated the other; which was primary and which was secondary.

When an appendicitis precedes a tubal pregnancy in which it apparently plays an etiological role, the anatomical changes frequently evolve as follows:

1. Appendicitis.
2. Peri-appendicitis.
3. Peri-adnexitis.
4. Formation of inflammatory adhesions interfering with tube mobility and tube function and producing tubal malformation.
5. Tubal pregnancy.

All these conditions favor the ectopic implantation of fertilized ova. Appendicitis may hasten tubal abortion through local infection, through general intoxication, may lead to suppuration of hematoceles or fetal cysts.

To differentiate appendicitis from extra-uterine pregnancy is at times difficult. In the unruptured state, the pregnant tube gives symptoms analogous to those of chronic appendicitis. An infected hematocele presents the signs of suppurative pelvic peritonitis. Peritoneal hemorrhage due to a ruptured tubal gestation sac has symptoms closely resembling a diffuse septic peritonitis. Positive Abderhalden test, absence of fever, vaginal hemorrhage, symptoms of internal hemorrhage will point to tubal pregnancy. It is interesting to make an exact diagnosis but as both diseases are surgical affections exposing mother and fetus to serious dangers, the watchword in both conditions should be early operation. Appendicitis calls for prompt operative treatment; extra-uterine pregnancy is an emergency condition calling for immediate ablation of the ectopic fetal sac.

In all the cases of appendicitis and extra-uterine pregnancy herein considered, twelve in number, operation gave

excellent results. The findings differed in nature and consequently the operative procedures varied in extent in the different cases.

PATHOLOGY.

Acute and chronic inflammations of the appendix involve the organ, in part or in its entirety, and are associated with catarrhal, fibrinous, sero-fibrinous, sero-purulent, or purulent exudates present in the cavity of the appendix, in it's wall, or around it. The inflammatory process may be limited to the mucous membrane, may involve part of, or the entire thickness of the appendical wall.

The appendix vermiformis may be partly or wholly intra- or extra-peritoneal. A retro-peritoneal or extra-peritoneal appendix the seat of suppurative inflammation gives rise to retro-peritoneal or extra-peritoneal pus collections. Adhesive inflammation may lead to permanent fixation of the appendix, to one or more abdominal viscera normal or pathologic, to the abdominal parietes, or to both. Inflammatory adhesions involving the tube, may angulate it, constrict it; may interfere with tubal mobility and tubal function; may change it's course and play a fairly important role in the etiology of sterility. The appendix, during a 280 day pregnancy, may touch every organ of the abdomen. Pus in quantities, large or small, may be present within the cavity of the appendix, in it's wall or around it. Acute suppurative inflammation of the uterus and tubes may be set up by direct extension from an acutely inflamed appendix. The walls of appendiceal or peri-appendiceal abscesses are formed in part by one or more of the following organs: uterus, adnexa, omentum, intestine, small or large, etc. An appendicular abscess may bulge into the posterior cul-de-sac, may open spontaneously into the uterus, vagina, rectum.

The inflammation proceeded to the state of gangrene in twenty-four cases; in eleven of these cases one or more perforations were present. The gangrene may be limited to the mucous membrane, may affect the entire appendiceal wall or the entire organ. Any part of the organ, tip, middle, base, may be gangrenous. Fecal concretions, one or more, were present in thirteen appendices. It is easy to understand how inflammation migrates from the appendix to the Fallopian tube, to the pregnant uterus, etc. Pelvic inflammatory processes extending by continuity or contiguity of tissue, occur in the pregnant as well as the non-pregnant. Distal pus collections are due to metastases by way of the lymph or blood channels. In the ulcerative type of inflammation the ulcer extends in depth and in surface area; when all the coats of the appendix have been burrowed through, a per-

foration results. The apex, the base, or any other part of the appendix may be the seat of the perforation.

COEXISTING PATHOLOGICAL CONDITIONS.

Coexisting pathological conditions are primary or secondary to the appendiceal inflammation or merely coincidental, bearing no relation of cause or effect to it. It is not uncommon for appendicitis in the female to be complicated by or associated with tubal and ovarian diseases: salpingitis, pyosalpinx, hydrosalpinx, ovarian abscess, tube-ovarian abscess, para-metritis, etc. Close anatomical association of the appendix with the uterus and the adnexa explains the frequent simultaneous involvement of these organs in disease processes.

INFLUENCE OF PREGNANCY UPON APPENDICITIS.

Upon a normal appendix, gestation has little or no influence. Upon an appendix, the seat of previous or latent disease, pregnancy exerts an unfavorable influence. It can intensify an existing inflammation. It may cause a previous inflammation to recur. In view of this possibility, many of our best clinicians recommend and practice the removal of the appendix in women married or about to be married who have had one or more attacks of appendicitis non-operatively treated.

The pregnant uterus as it ascends in the abdomen commonly displaces the coecum and the appendix from below up, from right to left and from behind forward. In enlarging, the uterus may stretch existing inflammatory adhesions; it may displace, twist, and kink the appendix and thereby whip into activity latent appendicular infections. Pregnancy is a serious complication of appendicitis, 1. When the appendix is adherent to the uterus. 2. When it is the seat of an inflammation, perforative, gangrenous or suppurative in type. 3. When it's inflammation leads to abscess-formation, near or distal. 4. When the uterus forms part of the wall of an appendicular, peri- or para-appendicular abscess. In the afore mentioned conditions, adhesions may be torn, abscesses may be ruptured by the enlarging uterus.

INFLUENCE OF APPENDICITIS ON PREGNANCY.

Appendicitis is a menace to the mother's life, it is a menace to the gestation. The danger increases with the advance of gestation and is most marked after the fourth month. Infection can and does spread from the appendix to the genital organs by way, 1. Of the peritoneum (localized or diffuse peritonitis). 2. Of the appendico-ovarian ligament. 3. Of adhesions existing between the uterus and a perityphilitic pus focus. 4. Of the Fallopian tube.

Even a mild case of appendicitis may lead to a plastic peritonitis closing permanently the lumina of both tubes. From inflammatory adhesions may result dysmenorrhea, subinvolution, sterility through inflammatory closure of tubal ostia, habitual abortion, extra-uterine pregnancy, a tendency to uncontrollable vomiting, etc.

Appendicitis in the pregnant state may or may not terminate pregnancy. The prognosis is good as to non-interruption of pregnancy. 1. When the appendix does not hang in the small pelvis. 2. When the inflammation is limited to the appendiceal mucosa. 3. When it does not extend beyond the appendiceal wall. 4. When the appendiceal abscess or periappendiceal abscess is small.

Premature termination of gestation either by fetal death, fetal expulsion or both may be caused by, 1. Sequels of previous appendicitis, acute or chronic; inflammatory adhesions, old or recent, preventing uterine expansion. 2. Infection from the appendix extending through the tubes to the uterus and its contents. 3. Infection reaching the placenta through lymphatic and vascular channels. 4. Metastatic inflammation of the placenta disturbing its circulation. 5. Local irritation. 6. Fatal effect of hyperpyrexia upon ovum.

The further pregnancy is advanced the greater the danger of abortion after operation. The chance of abortion after early operation is very small indeed for the operation is then done before an extensive inflammation has involved the uterus or an abscess rendered the patient septic. Tendency to abortion is small in clean cases as in this type the operative manipulation is reduced to a minimum.

In 173 cases of appendicitis herein studied it is stated that abortion was artificially induced nine times and occurred spontaneously forty-nine times. Caesarian section was performed four times. Abdominal one, vaginal three.

In eighty-three cases, pregnancy was not interrupted by the operation. In seventeen cases, no definite statement is made.

DIAGNOSIS.

Appendicitis is not as frequently misdiagnosed as formerly. Increased familiarity with the condition enables us to make an earlier and a more timely diagnosis. It is an established fact that the morbidity and mortality of this disease can be lessened if it be diagnosed and operated, before the advent of complications, perforation, gangrene abscess formation, peritoneal involvement, etc. The diagnostic difficulties increase with the advance of gestation and persist during the puerperium.

The symptomatology of appendicitis in the pregnant is the symptomatology of the disease in the non-pregnant. Never-

theless, the recognition of the condition is made more difficult by various factors. One or more of the cardinal symptoms may be lacking. The symptoms and signs may not be sufficiently pronounced to lead to careful investigation or may be classed among the various disturbances incident to pregnancy.

During pregnancy the abdominal walls are on the stretch; they lack the softness and pliability so essential to careful and satisfactory abdominal palpation. In very fleshy patients palpation does not give definite findings.

The seat of pain though always corresponding to the site of the inflamed appendix, may be abnormally high. The leukocyte count gives uncertain findings; at best, it has only relative or corroborative value.

Mistakes are less likely to occur by keeping in mind (a) that every pregnant woman is to be examined for physical defects; (b) That the history is all important; ask about previous attacks. (c) In gravid women, all attacks of indigestion associated with vomiting and fever should arouse suspicion and command a careful examination of the abdomen. (d) Right iliac pain unassociated with uterine contractions should lead one to think of appendicitis. (e) Deep seated retro-coecal and other abscesses may be detected by rectal examination. (f) Peri- or para-typhilitic abscesses may be detected by vaginal examination.

In a pregnant woman, acute abdominal pain of a sudden onset, at first diffuse and then remaining localized to the right iliac fossa, suggests appendicitis; more so if the patient gives the history of previous attacks.

DIFFERENTIAL DIAGNOSIS.

During gestation, many conditions simulate appendicitis. As most of these conditions demand operative relief, the resulting diagnostic mistakes are embarrassing and humiliating to the surgeon, but not commonly disastrous to the patient. In adnexal disease the pain and the objective findings are most always bilateral, while in appendicitis they are unilateral and the pain as a rule is more acute. Non-ruptured right tubal pregnancy simulates and is frequently diagnosed as chronic appendicitis. Rigidity and tenderness over McBurney's point are seldom marked in extra-uterine pregnancy. Intelligent interpretation of the clinical history and of the objective findings, furnished by a careful and thorough abdominal, rectal and vaginal examination helps one to arrive at a correct diagnosis. Abscesses in the pouch of Douglas due to perforative appendicitis have been wrongly attributed to primary uterine and tubal infection; right-sided parametritis due to the spreading of a retro-colic appendicitis has been diagnosed ordinary puerperal infection.

In pyelitis, uteritis, ureteric calculus of the right side one is guided by the urinary symptoms and findings. Hepatic colic has a sudden onset with pain in the right upper abdominal quadrant; this pain radiates toward the right shoulder and is usually apyretic. The pain of nephritic colic descends and radiates toward the external genitalia. In fecal impaction, the symptoms are less severe and yield to colonic injections and to laxatives.

In advanced pregnancy, the differential diagnosis between appendicitis and cholecystitis may prove difficult owing to the associated upward displacement of the cecum and appendix by the pregnant uterus.

PROGNOSIS.

Pregnancy increases the severity and the fatality of appendicitis. Death may be due to intestinal obstruction, to perforation of the appendix, to heart failure, to peritonitis, or to sepsis. Recovery takes place through the gradual subsidence of symptoms; through the spontaneous rupture of an appendicular abscess externally, or into the gut, vagina, urinary bladder, uterus, or other hollow viscus.

The type and the acuity of the inflammation influence the prognosis. The prognosis is good if the changes in the appendix are slight, if the inflammation is limited to the appendiceal wall; if there be slight or no peritoneal involvement, if complications be absent. It is grave in gangrenous, perforative and suppurative appendicitis and in all cases complicated by abscess formation near or distal, or by diffuse peritonitis. The results for the mother and fetus are better, the less advanced the gestation, the less virulent and wide spread the inflammation, the earlier the operation. Maternal mortality of appendicitis in pregnancy increases from the fourth month on.

As far as the child is concerned, prognosis is absolutely good in cases of early operated appendicitis. Severe maternal appendicitis is exceptionally grave for the fetus, who succumbs either through infection or through interruption of pregnancy. In our cases, there were fifty-eight abortions; of these nine were induced and forty-nine were spontaneous. The spontaneous abortions gave seventeen maternal deaths and thirty-two recoveries. The induced abortion gave four maternal deaths and five recoveries.

PROPHYLAXIS.

The cause of appendicitis is not known. Therefore, in the present state of our knowledge a discussion of the prophylaxis of appendicitis, of necessity must be and is incomplete, inadequate and inconclusive. The importance of constipation as an etiological factor in appendicitis is as yet undetermined.

We do know how to prevent appendicitis, but do we know how to lessen its morbidity and mortality. Some surgeons remove the appendix during the course of all laparotomies. The removal of a healthy organ because one is not certain that it will always remain free of disease is unnecessary, meddlesome, and contrary to the teachings of conservative surgery.

In all laparotomies for conditions other than appendicitis, if the patient's condition permits, the appendix should be examined and removed, 1. If it be abnormal in length, size or location. 2. If it be in close relation to a pedicle or denuded surface, left by operation. 3. If its cavity be partly or wholly obliterated. 4. If it be the seat of anatomic alterations, club-shaped, thickened, kinked, twisted, strictured, etc. 5. If it contain foreign bodies, fecal concretions, worms, etc. 6. If it be adherent, in part or in its entirety, to some normal or diseased contiguous organ or to the abdominal parietes. 7. If it be the sole content or one of the contents of a hernial sac. 8. If it be the seat of cystic, neoplastic or inflammatory disease.

Operations that contribute to the safety of a pregnant woman should be performed without hesitation.

INDICATIONS FOR OPERATION.

Clinical cures obtained by medicinal measures are rarely anatomical cures. Starvation treatment is debilitating to the mother, is unfavorable to fetal growth. Perforation, abscess, general peritonitis, subdiaphragmatic abscess, thrombosis and embolism are possible results of expectant treatment. Better to remove too many appendices than too few. Be not deterred by the possibility of a difficult operation for the results of early operation are satisfactory and the mortality low.

Operate early in the attack and early in the course of pregnancy. As a general proposition, operation does not interrupt pregnancy. The triumphs of ovariectomy and hysterectomy in pregnancy are well known; in appendicitis operation is even more urgent. Accumulated instances are on record in which pregnant uteri have been operated upon, cauterized, etc., in which ovarian and other pelvic tumors have been removed without pregnancy being terminated. The high mortality of appendicitis in pregnant women is due to fatal temporization. Placental, uterine and peritoneal infections are such serious complications that one should if possible operate before the inflammatory process has taken place, before the onset of peritoneal or other complications.

Operate early in gestation. At that period the uterus is not large enough to be in the way. The operation is less difficult; the tendency to the interruption of pregnancy is

minimal and the percentage of maternal recoveries is higher. The danger of recurrence in the latter months of gestation calls for operation during the attack; if that be not feasible an interval operation should be performed as long before the labor as possible.

Operation in fifty cases of non-perforative appendicitis gave only one maternal death and seven abortions. In fifty-five cases of diffuse peritonitis secondary to appendicitis, there were forty-four maternal deaths, only one child was saved, all the others were born prematurely or died soon after birth from weakness, or the illness of the mother resulted fatally before the termination of labor.

TREATMENT.

Interruption of pregnancy is not indicated; it increases the danger. Rest should be enjoined; during the operation, the uterus should be handled and exposed as little as possible, after the operation, opiates should be administered. In a clean case, the operative manipulation is slight. Artificial evacuation of the the uterus before laparotomy is indicated only when the child is dead or when there are appreciable signs of labor. If the uterus be artificially emptied before the seventh month, the child will be definitely lost and the patient not improved. By evacuating an appendiceal abscess before emptying the uterus one avoids flooding the free peritoneal cavity with pus. Operations for appendicitis are performed under local or general anaesthesia. Some operators resort to lumbar anaesthesia. Operate as rapidly as is consistent with thoroughness and the patient's welfare.

The operation of election is appendectomy, the technique of which is little influenced by the presence of pregnancy. The same surgical principles are applicable in the pregnant as in the non-pregnant.

When in doubt as to whether the case is one of appendicitis, salpingitis, tubal pregnancy or other pathological conditions, use a supra-pubic median incision. This incision affords easy access to most of the pelvic contents and though it is not the incision of election for exposure of the appendix, it is a very serviceable incision. In cases of combined appendicitis and salpingitis, combined appendicitis and tubal pregnancy, combined uterine myoma and appendicitis, etc., the median infraumbilical incision should be employed.

In 125 of our cases the appendix was removed. In forty-three cases, it is not stated whether it was removed or not. In five cases, it was sought but not found, and therefore not removed. Each of these cases presented an abscess, which was evacuated and drained. If the appendix be imbedded in

a mass of firm inflammatory adhesions, it can be removed by shelling it out of its peritoneal coat.

An appendiceal abscess should be opened at its point of maximal bulging; preferably through a cutaneous surface. If the appendix be not easily found, be content with incising the abscess, evacuating its contents and resorting to tube or gauze drainage. A subsequent operation will rarely be required to remove the appendix. Appendiceal abscesses have been opened and drained through the vagina. Appendiceal abscesses have also been opened through the rectum. These are exceptional procedures: methods of necessity, not of election.

The post operative treatment is that which is employed in the non-gravid modified only by a longer sojourn in bed, thereby giving time for firm consolidation of the operative wound.

POST OPERATIVE COMPLICATIONS AND SEQUELAE.

In cases of such widely different nature as those herein studied, operated in different surroundings and by different operators, one is not surprised to find noted the occurrence of post operative complications and post operative sequelae. The danger of hernia development after timely operations for appendicitis is practically nil. The protection of the operative scar by the aid of adhesive plaster has been recommended. See that labor be not unduly prolonged.

Among the sequelae reported in these cases were four ventral hernias, three cases of diffuse peritonitis, thrombosis of femoral veins, phlebitis, subphrenic abscess, intestinal fistulae, etc.

SUMMARY.

1. Appendicitis occurs at all ages and in both sexes. It presents to all medical men important diagnostic, prognostic and therapeutic features.

2. Appendicitis acute, or chronic, initial, relapsing or recurrent, primary or secondary, complicates pregnancy with greater frequency than is believed. It is the most important complication of pregnancy.

3. It occurs in single and twin gestations; in first, early and late pregnancies; in primiparae, deutiparae, and multiparae.

4. It occurs at all periods of the child-bearing age and at all periods of gestation. It complicates both intra- and extra-uterine pregnancies and can coexist with other disease processes to which it may be primary, secondary or coincidental.

5. Gestation exerts no untoward influence upon the normal appendix. It can and frequently does aggravate existing, or determine new inflammatory disturbances in appendices

deviating from the normal in form, length, mobility, location, etc., in appendices bound down by adhesions or the seat of inflammatory or other degenerative changes. Pregnancy does not relieve the dangers of appendicitis, but aggravates them.

6. Appendicitis and uni or bilateral tubal pregnancy are frequently mistaken for each other. They may occur simultaneously or consecutively, may be either primary or secondary to, or independent of each other.

7. In appendicitis, in ectopic pregnancy and in combined appendicitis and ectopic pregnancy, of obscure symptomatology, it matters not whether you are certain or in doubt as to the real diagnosis, early and timely operative treatment is imperatively indicated.

8. During gestation, every type of appendicitis may occur: adhesive, catarrhal, gangrenous, ulcerative, obliterative, perforative and suppurative.

9. Appendicitis with adhesion formation is of great significance because adhesions of inflammatory origin can (a) incarcerate the pregnant uterus in the pelvis and mechanically hinder the enlargement of the uterus, (b) impair the contractibility of the uterus, (c) interfere with uterine labor contractions, (d) entail subinvolution, (e) induce sterility, (f) disturb tubal and ovarian integrity of function and of structure, (g) determine ileus, (h) produce abortion, and, (i) lead to extra-uterine pregnancy.

10. Chief among the coexisting pathological conditions! noted in appendicitis are simultaneous or consecutive inflammation of the uterus, tubes or other pelvic organs. The close anatomical relations existing between the appendix and the pelvic organs explain their frequent association in disease processes.

11. Appendicitis has a greater morbidity and a higher mortality in the pregnant than in the non-pregnant, operated or non-operated. It may terminate pregnancy.

12. The symptomatology of appendicitis in the pregnant is the same as in the non-pregnant. The clinical picture however, is blurred by the coexisting symptoms of pregnancy. Diagnostic mistakes may be lessened by keeping in mind that appendicitis occurs in pregnant women; that a history of previous attacks during the same or previous pregnancies can frequently be elicited by thorough and deliberate physical examination. With care, one can in these cases almost always arrive at a correct diagnosis.

13. To establish with certainty the diagnosis of appendicitis during pregnancy, it is necessary to exclude the presence of myalgia due to stretching of abdominal muscles, typhoid

fever, ruptured or non-ruptured tubal pregnancy, cholecystitis, salpingitis, ovaritis, adnexitis, ovarian cyst with or without a twisted pedicle, rightsided pyelitis and ureteritis, fecal impaction, hepatic and nephritic colic. At times, any of the fore-mentioned conditions so closely resemble appendicitis as to cause diagnostic errors and operative mistakes.

14. The morbidity and mortality of appendicitis complicating pregnancy and the puerperium are the morbidity and mortality of delay in applying efficient surgical treatment. The initial symptoms of the attack do not enable the clinician to foretell accurately how a given case will terminate. What is going to happen in ten, twenty or forty hours following the onset of appendicitis cannot be foreseen. When the condition is diagnosed and remedied early, the mortality is practically nil. Abscess formation may be forestalled by early diagnosis and late operation. The pregnant woman whose metabolism is good is a good subject for operative measures.

15. Prognosis is better for the mother if there be no interruption of pregnancy spontaneous and otherwise. The bad attacks cause abortions and abortion aggravates the illness. In the great majority of surgically treated there is no interruption of pregnancy and when it does occur it is not due directly to the operation. The interruption of pregnancy is not indicated. It aggravates the prognosis. The fetal prognosis is good in early operated cases.

16. The following prophylactic measures are sound and safe and are recommended for general adoption: (a) During the child-bearing age, recurrent attacks of pelvic pain, dysmenorrhea, menstrual and other pelvic disturbances unassociated with objective pelvic findings are not infrequently due to unrecognized appendicitis or sequelae thereof. In the presence of this etiological factor, the ablation of the appendix is indicated. (b) In laparotomies for conditions other than appendicitis, the appendix should be examined. Should it present any deviation from the normal, its removal is indicated. (c) During the child-bearing age, any woman who has had one or more attacks of appendicitis treated non-operatively should have her appendix removed so as to correct existing pathological conditions and prevent future attacks of appendicitis and complications incident thereto. True prophylaxis in a woman of child-bearing age who has had one or more well marked attacks of appendicitis is an interval operation. It goes without saying that constipation is to be avoided and that other hygienic precautions are to be observed.

17. A definite and accurate diagnosis of acute, chronic or recurrent appendicitis, irrespective of the stage of pregnancy,

invariably calls for operation. The disease during pregnancy runs such a rapid destructive course that delay is hazardous. Operation should be early and immediate. A case may be rendered hopeless by hesitation and inaction. Temporizing methods are extremely dangerous.

18. Treat appendicitis in the pregnant female as you treat it in the non-pregnant. Every pregnant woman who is a subject of appendicitis should be operated on just as soon as the diagnosis is made, whether the attack is the first, second or third.

The unusual risks of leaving a diseased appendix in the abdominal cavity are much increased by the pregnant state and the evil consequences of another attack, i.e., gangrene or perforation will be correspondingly greater. The danger of recurrence in the later months of pregnancy and in the child-bed period calls for operation preferably during the attack. If the patient is not seen in time, one will do the next best thing, an interval operation during the pregnancy. Pregnancy is an additional indication for operation in cases of appendicitis.

19. In inflammatory disease of the appendix, the ideal operation is an appendectomy. In some cases, however, one has to be content with incision, evacuation and drainage of an appendiceal abscess. Exceptionally drainage of abscesses in Douglas' pouch may be effected through the vagina or rectum. Pus should be evacuated irrespective of uterine contents, and irrespective of its location.

20. It is well to keep in mind that for an appendectomy the median incision is contradicted in the later months of pregnancy, that it is best to avoid or to reduce to a minimum the manipulations of the uterus; opiates are indicated in the after treatment. Labor when it occurs shortly after a laparotomy is not to be unduly prolonged; it may have to be assisted.

Human Rabies. Grenier de Cardenal, Legrand and Benoit refer to 6 convulsive cases with death in 48 hours reported by Jourdan and Marchand and one of paralytic type with death in 5 days. The first three authors report three other cases, one of slow development, without history of dog bite but probably due to horse bite in military service, death occurring in syncope in three days; a case in woman, dying in 48 hours and a fulminant case in a girl of 12 with death in three hours. In the first of these three cases, the primary diagnosis was angina, diagnosis being made from the typic, literal hydrophobia usually denied by modern writers.

BUFFALO MEDICAL JOURNAL

A Monthly Review of Medicine and Surgery

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Need of More Medical Officers.

In the spring, it was stated that about 20,000 physicians would be needed for the U. S. army. Rather less than this number has been raised but, with the considerably increased regular army medical corps and the recall of many retired—and not necessarily superannuated or incapacitated—surgeons, and the surgeons taken over with the national guard, just about the requisite number has been secured for the present and the immediate future as represented by the demands of the first and second draft calls. Largely to make good the shortage of surgeons among our allies, it is now stated that about 15,000 more will be needed, so that the remarks to follow are still in order.

Passing over the possibility of an early cessation of hostilities, in regard to which hindsight will be more valuable than foresight, it should be thoroughly comprehended that the war cannot be fought by those who have nothing better to do, who will sacrifice little beyond personal convenience and hazard, or who have not urgent private business and responsibilities to dependents. If anything, this is more true of the medical men than of the strictly combatant forces. When we realize that the average physician is 26 at graduation and 27 at the completion of his interne service, and that the number of graduates has fallen off in the last 12 years to approximately 60% of what it was for the same preceding period, it is evident that the medical personnel simply cannot be secured even by a draft of every physician of an age corresponding to that for which we at present expect to draft about 20% of the male population generally. Accurate stat-

istics are not at hand but, so far as can be determined by observation of the medical personnel of a division (i.e. about 250 physicians in a mass of 25,000 men) about 1/3 are in the neighborhood of 30, 1/3 near 50, and 1/3 between these extremes. It is no time for the physician to feel that grey hair or little hair at all exempts him from the duty of volunteering. It is no time to wait for a medical draft, however desirable that may be for the rank and file of the army. No draft on the medical profession can operate with as little hardship as the sincere personal judgment of the individual physician, as to the actual need of his services to his clientele or hospital on the one hand and to his country as an organized fighting force on the other.

The same general fact can be better stated in a still more personal way. Disregard the matter of relative duty to private and to military demands. Disregard the problem of what you will do when the war is over. If it is short, your practice will return to you even more surely than if you took a fairly long vacation or a post graduate course—and from many aspects, medical service is both. If the war is long, there will be such a readjustment of supply and demand, that any fairly well qualified physician can get a practice anywhere or, what is still more plausible, the medical profession will be “socialized” in one way or another, and both employment and living income will be assured. Don’t imagine because you have got into middle-aged ways of thinking of yourself and are accustomed to certain luxuries and conveniences, that you cannot stand the hardships of a healthy outdoor life. If the matter of personal hazard occurs to you at all, the best statistics available show that, for a very young man, the strictly military risk of being killed or injured to a serious degree is at most, double that of death and physical injury in civil life, with a slight reduction of the non-military risks on account of better hygiene and sanitation and discipline. For a man close to the maximum age for service, with a due allowance for his probable utilization in the rear, the strictly military risk is both relatively and actually very small, probably not much if any greater than that directly due to the possession and use of an automobile. If he is organically diseased or really in a state of presenility, the hardships of military life will probably result in early incapacity and retirement, or in a considerable increase in probability of death from indirect causes, but the opportunity to live more actively and to acquire a new experience compensate for the actual average shortening of life, not to mention the fact that military service will give many men an extension of their lease on life.

Don't "weigh" the advantages and duties of civil and military practice. Put it to yourself in this way: "Can I or can I not volunteer for military service without seriously affecting my ability to support my family or without sacrificing whatever capital I have accumulated for future use?" Any man who has to consider himself alone, can live well on even a lieutenant's salary and perquisites. Moreover, there have been no estimates of average medical earnings for two generations that show a net income approaching this amount. But don't volunteer unless you are willing to accept active service when you are called and to take what comes.

BOOK REVIEWS

Books mentioned may be inspected at and ordered through this office. So far as possible, books received in any month will be reviewed in the issue of the second month following. Pamphlets, quarterly and similar periodicals, reports, transactions, etc., will, as a rule, merely be mentioned.

Food For the Sick—A Manual for the Physician and Patient.
By Solomon Strouse, M. D., and Maude A. Perry, A. B.
W. B. Saunders Company, Philadelphia and London, 1917.
Price \$1.50.

The first part of the book gives a concise review of the general principles of nutrition and dietetics, with good reference lists of the chemical composition and caloric values of foods. Diseases of the various systems of the body are next taken up in order, the physiology and pathology of each condition given as far as it relates to indications for diet, and detailed menus are given with the principles involved. I was interested on the chapter on diabetes as it is practical and should be of great practical service to men treating such cases. Particularly good is the list of foods arranged according to their percentage composition of carbohydrates, but all the articles are useful and the book is both valuable and practical.

Physical Diagnosis. Part I by George William Morris, A. B., M. D., Associate in Medicine at the University of Pennsylvania. Part II. by H. R. M. Landis, A. B., M. D., Director of Clinical and Sociological Department of the Phipps Institute, Philadelphia. Octavo of 1,000 pages with 325 illustrations, mostly original. W. B. Saunders Company. Cloth \$7.00 net.

Diagnostic Et Traitement De La Meningite Cerebro-Spinale.

Dr. Dopter, Prof. at the School of Val-de-Grace, 96 pages, 17 illustrations, 2 francs. J-B. Bailliere et Fils, 19, rue Hauteville, Paris.

This is one of the series of Actualites Medicales.

Physical Diagnosis. By W. D. Rose, M. D., Associate Professor of Medicine and Lecturer on Physical Diagnosis in the Medical Department of the University of Arkansas. 500 pages. 6x9, with 294 illustrations. Cloth, \$4.00. St. Louis, C. V. Mosby Co., 1917.

Dr. Rose has produced a handsome book in which the text is amply supplemented by pictorial and diagrammatic illustrations, taken mostly from standard works. In addition to physical diagnosis proper, he gives us about one hundred pages on "the principal diagnostic signs referable to the head, neck, and limbs, together with a minimum examination of the nervous system." The descriptive matter is clear and well arranged and a copious index makes every page readily available for reference. The book is admirably adapted to the use of the practitioner who wants guidance in diagnosis without an excessive amount of discussion over the finer points on which authorities are apt to differ. Thus we note that roentgenography is very lightly touched upon, because the author believes in exhausting the possibilities of careful examination and clinical study before resorting to the application of the X-rays.

Technic of the Irrigation Treatment of Wounds by the Carrel Method by J. Dumas and Anne Carrel. Authorized translation by Adrian V. S. Lambert, M. D., Acting Professor of Surgery in the College of Physicians and Surgeons (Columbia University), New York. With an Introduction by W. W. Keen, M. D., L.L.D., F. R. C. S. (Hon.). Cloth, 90 pages, illustrated. Price, \$1.25. Paul B. Hoeber, New York, 1917

This little book was prepared by Madame Carrel and Dr. Dumas to explain and illustrate the details of the Carrel method. It is designed especially for the use of nurses and assistants, and to supplement the more technical treatment of the subject by Dr. Carrel. All the essentials of the method are given in compact form without any admixture of surgical or pathological details. There is a very serviceable glossary of the French and English terms pertaining to the technic.

Dr. Keen says: "Every surgeon in the various military and naval forces and also those in civil life who have to do with industrial and other accidental wounds should know this technic by heart and practice it with exactness. They will be rewarded by a most gratifying success."

The Modern Gasoline Automobile: Its Design, Construction, Operation and Maintenance. A Practical, Comprehensive Treatise Explaining All Principles Pertaining to Gasoline Automobiles and Their Component Parts. The Most Complete Up-to-Date Treatise on Gasoline Automobiles Ever Published. By Victor W. Page, M. E. Seventh Edition. Cloth. Price, \$3 net. Pp. 1032, with 100 illustrations. New York: The Norman W. Henley Publishing Company, 1918.

This book is described as "a liberal education in the automobile art." It is nearly twice as large as the original edition, published six years ago. Physicians will appreciate the fact that it is a complete treatise on the anatomy and physiology of the automobile, solving many of the mysteries that perplex the buyer and operator of this modern mechanical wonder.

Progressive Medicine, Vol. XX, No. 4.. Edited by Hobart Amory Hare, M. D., Professor of Therapeutics, Materia Medica and Diagnosis in the Jefferson Medical College, Philadelphia; assisted by Leighton F. Appleman, M. D., Instructor in Therapeutics, Jefferson Medical College, Philadelphia. December 1, 1917. Octavo, 466 pages, illustrated. Quarterly, \$6.00 per annum. Philadelphia, Lea & Febiger.

This number reviews recent progress in our knowledge of diseases affecting the digestive tract and allied organs, the kidneys, and the genito-urinary organs. One chapter is devoted to military surgery, and another to practical therapeutic referendum. The high standard of this well known publication is maintained in these articles.

The Medical Clinics of North America. Volume I. Number III, (The New York Number, November, 1917). Octavo of 346 pages, 37 illustrations. Philadelphia and London: W. B. Saunders Company. Published Bi-monthly. Price, per year: Paper, \$10.00; Cloth, \$14.00.

This volume brings together the clinical teachings of a score or more of the leading authorities on internal medicine in New York City, representing seven hospitals and medical

schools. The cases selected for discussion represent conditions that the general practitioner is likely to meet in his every day experiences. The method of presentation gives the reader a good idea of the latest advances in case-teaching as demonstrated in our leading institutions. As a source of practical information on the subjects considered the volume could hardly be improved.

Treasury Annual Reports, 1917, U. S. Public Service.

Proceedings of the Eleventh Annual Meeting, Association of Life Insurance Presidents, New York, Dec. 6-7, 1917.

Bureau of American Ethnology, Bulletin 63.

SOCIETY MEETINGS

Brief reports and announcements of meetings of societies of Western New York and those of general scope, are requested from Secretaries. Copy should be on hand the fifteenth of the month. Full transactions will be published at cost of composition.

Elmira Academy of Medicine, February 5th. Program: Dr. Arthur Booth, Blood Transfusion; Dr. Ross G. Loop and Dr. N. H. Soble, subjects not announced.

Rochester Academy of Medicine, Meeting Feb. 13, speaker from the department of the Surgeon General U. S. Army.

Erie County Medical Society. Meeting Feb. 18. Program: Control of Venereal Diseases, Dr. E. H. Marsh, New York; Treatment and Diagnosis of Venereal Diseases, Dr. Grover Wende, Buffalo.

The annual meeting of the **Gross Medical Club** was held at the Hotel Statler, Friday, Feb. 15th, Dr. Jas. E. King, Pres. presiding.

Dr. Byron E. Smith of Angola presented a most interesting paper, "The uric acid bugaboo."

He went most carefully into the formation of uric acid in the system and its elimination by the urine; also as to the form, acid urates and urates in which it is found. Great stress was laid on the assertion that uric acid, as a causative agent in many of the ills attributed to it, and especially painful conditions, as rheumatism, neuritis, neuralgia, etc., was a sad error, a delusion that should be corrected. Scientifically, but clear and practical, Dr. Smith showed how easily an ap-

proximately accurate estimation of uric acid in excess could be detected from the urine. When the urine cools; becomes cider like in appearance, and becomes clear on heating, urates is the cause. In the Heller test for albumin, if a whiteish zone appears in the free urine, this is acid urates; in both conditions they show an excess of uric acid in the system.

In corroboration of his contentions he reported several cases that had been treated weeks for neuritis, rheumatism and like conditions where pain was the important symptom; in all an excess of uric acid was eliminated, recovery taking place very promptly under appropriate treatment as was indicated by an estimation of the alkaline phosphates in the urine by aid of the phosphatometer; the conditions were true nerve involvement as the instrument showed.

Dr. Tyler, Alden. One of the best papers that I have ever listened to. Fully 50% of cases sent to the Sanitarium, diagnosed as rheumatism, and due to uric acid in excess, we find not to be rheumatism, but pain due to some nerve condition. We use the phosphatometer in nearly every case; in a goodly number a low index is found and the phosphorus mixture of Dowd is ordered; most brilliant results has followed.

Dr. Phelps, E. Aurora. Too much cannot be said in praise of this most interesting paper; it certainly has taught me many things that I did not know.

Dr. Geo. F. Cott. I have used the Dowd Phosphatometer for several years; it may not be of much value to the nose and throat specialist, but it is of undoubted great service to the general practitioner; I know from personal knowledge it is used extensively and hear most glowing reports.

Dr. W. H. Baker, Williamsville, I believe Dr. Smith is correct, uric acid as a cause of disease has been an over worked condition.

Dr. Geo. F. Cott, Buffalo, reported a case of cancer of the larynx in which he removed the whole organ some five months ago. The patient at the present time is working every day and feels fairly well.

The election of officers resulted as follows: Dr. Byron E. Smith, Angola, N. Y., President; Dr. Harry R. Trick, Buffalo, N. Y., Vice-President; Dr. Chester C. Cott, Buffalo, N. Y., Secretary. The annual banquet followed the meeting.

CORRESPONDENCE

Hotel Royal, Paris, France, Nov. 18, 1917.

My dear Dr. Benedict:

Dr. Mabel Flood, U. B. 1911, and I are on our way to Serbia where we are going for the American Red Cross. Our

trip across the Atlantic was most delightful and we saw no submarines.

In Bordeaux were many of our fellow countrymen in the uniform of the U. S. A., and as all soldiers or people in uniform are a part of the American Expeditionary Force, we had to go to the American Provo-marshal to report, which we did and the next day did the same thing in Paris.

From what we have seen so far, Germany will never starve the French out. They have such wonderful vegetables, and it would be better for America if we were always obliged to eat their war bread, which is dark but good. There is a shortage of butter, although we have it for breakfast, also sugar and wheat are none too plentiful.

The women run all subway trains and motor cars in many places, also street cars.

The French men who are not able to return to the front on account of their injuries, work and cover up their infirmities and go cheerfully about their affairs.

Americans are in great favor and the Red Cross much looked up to.

The Hotel Royal where we are staying has an allowance of coal, so we are not cold, although it is not overheated like an American hotel.

In Paris, the doctors are injecting the typhoid and paratyphoid all in one dose and it knocks you out fairly well for 48 hours. We had ours at Dr. Bleake's hospital. All fractures are hung up on splints which are suspended from above and joints are not immobilized.

I cannot see any difference between the old life in Paris and now except there is not so much music and every one has on some uniform. At Napoleon's Tomb today, we saw a good many airplanes and some Zeppelins which have been captured from the Germans and many, many guns, etc.

I hope every American man, woman and child will do everything that can be done to end this war. What a lesson in saving of food they could have here.

We leave on Saturday for Nice, then go to Rome and then proceed to the bottom of Italy, then to Athens, Greece, then Salonica, then nine hours by motor to Voden, Serbia.

Very cordially,

REGINA FLOOD KEYES.

(Note: In accordance with our general policy, we have delayed publication of this letter for a month, in order to avoid any possible leak of information through hostile channels.
A. L. B.)

Dec. 18, 1918.

A. L. Benedict, M. D.,
Buffalo, N. Y.

Dear Sir:—

In accordance with your request, I am sending you a short account of my trip to England with Base Hospital No. 23.

After a hesitating start from Buffalo which finally occurred on Nov. 21, 1917, and, after a rather disagreeable and stormy voyage, we arrived in England about two and one-half weeks later. The busy censor prevents one from being definite and, consequently, I cannot give you as much information as I would like. But our voyage held some interest. We were unusually fortunate in having twenty-five such good fellows and I think that it would have been difficult to have selected a more agreeable and jolly aggregation. At all times there was plenty of fun and goodfellowship. The weather and sea however were different. The weather was cold, considerable rain and enough fog to make our trip more or less perilous. The sea was very rough all the way over and occasionally a vacant chair at table told us that its former occupant was Hooverizing. We travelled without outward lights at night and it was so dark and desolate that many times it was possible to be within three feet of another person and not appreciate it. I believe that it was at such times that we had the most apprehension. I personally saw no submarines except in my sleep and I believe that this fact accounts for some of the large numbers that have been seen on other voyages.

We finally arrived at a seaport "Somewhere in England" but our departure from this port was delayed, in inclement weather, for a number of hours. The delay was due to the great number of soldiers who were entraining at this point. However, when our turn came, we boarded a train for our rest camp. The English trains are very much smaller than our own and are conspicuous in their lack of comforts. They are divided into compartments and frequently are without heat.

After arriving at our rest camp I was unfortunate in being compelled to take to my bed on account of an attack of Broncho-Pneumonia. I, however, was able to be up in about twelve days but the rest of the Unit had, in the meantime, departed for their station in France and I was left behind. It is rather an interesting experience to be sick in bed while associated with an organization and have all its members depart suddenly and leave you alone and friendless in a strange country. I think the day that the unit left me stranded was the most desolate one which I have ever spent, but this is

just one of the experiences which increases a man's interest in life.

The one thing very pleasing to me was the kindness extended by the English people. American soldiers are received everywhere in England with the greatest consideration and, while the Englishman at first approach may seem very diffident, after you have once come to know him well you will find that he will sacrifice a great deal of his personal reticence to be of service to you. On one occasion, in a London fog, an Englishman went three blocks out of his way in order to direct me to my hotel. Many other instances of his kindness could be mentioned.

Shortly after getting out of bed I went to London to ascertain the advisability of my going to France. When I reached headquarters, the authorities would not allow me to proceed but appointed an examining board which advised my return to America.

While awaiting orders in London I had numerous opportunities to visit the various hospitals, both civil and military, and it might be of interest to note that the civil hospitals impress one with their great size, their age, their good management, and the fact that they have no private rooms. Consequently, there are no pay cases and the hospitals are principally maintained by public subscription. All private cases are either operated at home or go to a nursing home for their treatment.

One is further impressed by the skill of the operators, their dexterity and their knowledge of anatomy, but in many instances their technique differs from ours. The anaesthetic of choice in the London hospitals is ether, and in only one or two of the hospitals did I find gas used. While there I visited a number of the military hospitals, and I believe that in their line they are doing excellent work. I was especially interested in the Froghal Jaw Hospital at Sideup, Kent, where nothing but face and jaw cases are handled. This hospital is under the management of Major Gillies who is doing some very interesting work in the shifting of skin, especially from the head and chest to the face. At his first operation he dissects the skin and makes a tube of skin which acts as a connection for nourishment. At a later operation he shifts the skin to the desired locality with the tube still connected. Later, when he finds that the skin is going to live, he returns the tube of skin to its original place. The improvement in the facial appearance of some of these cases is wonderful. I saw one case in which an entire nose was being made. This type of operation is very difficult, because a supporting bridge must first be formed, and this is

made by shifting the superior turbinate bones and placing upon them a bony and cartilaginous graft from the ninth rib. A very large graft of the skin and underlying structures is then applied and sutured into place. The graft is made purposely large to allow of contraction later. The inner surface is then epithelized and the final result is startling.

In the bone graft work the methods described by Albee are followed, using a portion of a rib for the graft material. Major Gillies also has a very interesting method of getting transplanted skin to live but, as he has not written about it up to the present time, I feel that it would be inconsiderate on my part to describe the process in print.

At this hospital there were three hundred and fifty resident patients and about the same number of non-residents. The hospital is beautifully situated in the country and is on the temporary cottage plan. The technique here was excellent, and I expect that in the very near future we will hear a mighty good report from this hospital.

From the number of injured that I saw in the military hospitals in England, it is quite evident that we will soon face the same conditions in America. Some of our boys will soon be returning to us wounded, broken down and some cripples for life. Those that are left in the United States cannot do too much in the way of contributing money and sending various little comforts to the boys who are bearing the brunt of battle in the front line trenches. The things most desired at that time were socks, American tobacco and cigarettes. As a usual thing, sweaters are contra-indicated in the front line trenches because of the vermin.

In closing I might say that one cannot help but be impressed with the fact that the British people as a whole will continue fighting until the aims of Democracy have been realized.

Sincerely yours,

F. W. McGUIRE.

TOPICS OF PUBLIC INTEREST

Mobilizing the Profession for War. Lt. Col. Robert E. Noble, M. C., emphasizes in the Dec. issue of the Southern Medical Journal the need of the country. The Medical Reserve Corps is, at present, just about adequate to the immediate needs of the troops raised. The Surgeon General should have men ready, either in training or available for immediate special detail from civil life as units of troops are raised. A million more troops will require about 10,000 more

physicians. We have already alluded to the fact, which Col. Noble states in slightly different terms, that the best preliminary examining and exemption board is the physician himself. Every young man as he completes his internship should jump at the opportunity, unless he is physically deficient. A first lieutenancy in the army is the best experience offered and at the highest pay, unless in very exceptional instances. It is likely that the next graduating class will be required without interne service, for there is great need of the equivalent of internes in the army, to relieve older and more experienced men of details. But, probably not more than 2,500 medical officers a year can be drawn from any one graduating class, and the army needs somewhere in the neighborhood of 10,000 physicians, at least where it can put its fingers on them. So far as our observation goes, the M. R. C. is divided just about $33\frac{1}{3}$ — $33\frac{1}{3}$ — $33\frac{1}{3}$ among the young men, the men of 35-45 and the men well over draft age for any country. The older men seem to stand army life and to enjoy the many social pleasures afforded just as well as the younger ones. Good use can be made of any kind of specialist, even the obstetrician and gynecologist, and the government can convert a general practitioner into a specialist and vice versa, or turn one kind of a specialist into another with the greatest facility, either by actual clinical work under proper guidance, or by sending him to some medical center for a special course. Even if a physician is modest enough to think that he does not amount to much as such, there are plenty of needs for mere faithfulness, common sense, or ability along other lines, to carry on the manifold functions of the medical department. But don't volunteer if you are afraid of hard work, or if you are going to insist on being pampered or paid on the basis of fancy consultation prices, or if you expect to be continually thanked for the sacrifice you will have made.

Tuberculosis of Stock Animals. Dr. J. A. Kiernan, Chief of the Tuberculosis Division of the Bureau of Animal Industry, states that, of 14 million cattle and sheep slaughtered during the fiscal year ending with June, 1917, 3,397,000 were tuberculous. He thinks that swine are infected from skim milk returned from creameries, and that this by-product should be pasteurized. With the growing belief that so-called tuberculin reactions are merely due to sensitiveness to foreign proteins, more common in the tuberculous but not really diagnostic, the problem becomes increasingly difficult. However, human tuberculosis seems to be on the decline and it is possible that there is some fallacy in this alarm.

The Dunkirk Health Dept. gives the following vital statistics for 1917: births 596, deaths 309, the highest for each in 6 years. 178 marriages took place, the largest number since 1913.

The U. of B. Pharmacal Alumni held their annual dinner at the Ellicott Club Jan. 31.

Jackson Health Resort at Dansville is now a government hospital with Major Arthur H. Crosbie of Boston in charge. It will be known as hospital No. 18. Soldiers and officers of the U. S. from home and abroad will be received as patients. The outlying cottages will be used more particularly for officers, soldiers and nurses, the patients to be cared for in the sanitarium proper. When improvements are completed there will be accommodation for 500.

The New City Hospital on the West Farm site in Kensington was opened for the care of tuberculous patients. This will help to relieve the crowded condition of the J. N. Adam Hospital at Perrysburg.

The Minnesota State Pharmaceutical Association convention was held Feb. 6-8, 1918. F. A. Upsher Smith, Ph.C., of St. Paul, read a paper on the conservation of glycerin, sugar and alcohol in medicinal use. He said that the British Pharmaceutical Society has worked out changes in the formulas in the British Pharmacopia to reduce the consumption of sugar and glycerin. These modified formulas have been officially adopted by the Pharmacopia committee of the General Medical Council for the duration of the war, and this body has withdrawn from the Pharmacopia directions for the use of glycerin and sugar in certain preparations. Mr. Smith urges that the U. S. pharmacists follow the example of their British colleagues. He figures that the U. S. pharmacists use yearly 2 million pounds of glycerin and 500 pounds of sugar, and that a very large amount of this material could be saved for other purposes.

Mr. R. R. Denny, chairman of the Physician's Lease Committee of the Chicago Rotary Club, announces that Senate Bill No. 2859, providing a moratorium for soldiers and sailors during the war, has been passed. Doctors are urged to procure a copy of this bill and see how it applies to the subject of physician's leases.

The Avon Inn, for many years a sanitarium, noted for its

sulphur baths, more recently an automobile inn, will shortly be opened as a sanitarium by Dr. W. E. Gregory for many years of the staff of the Jackson Health Resort of Dansville, associated with Dr. Glidden, who joined the staff of the latter institution a few years ago. The Jackson Health Resort will be taken over by the U. S. Government.

Veterinarians Needed for Army Medical Corps. About 2,000 trained men are needed for foreign service.

The Corning Hospital will receive \$100,000 from the estate of the late Miss Etha Bump.

The State Sanitary Code has been adopted by the town and village of Lancaster and the town of Elma.

The Buffalo Base Hospital Unit has been divided into two sections in France.

The Rochester Base Hospital No. 19, was given a farewell dinner at the Genesee Valley Club, Jan. 2, by the Rochester Medical Assn.

N. Y. State to be Dry. A bill has been introduced to make the state bone dry, except the use of liquors for medical, scientific and sacramental purposes, from Oct. 1 for the duration of the war and a year allowed for demobilization.

Daylight Saving. It is expected that the state legislature will pass a bill setting the clocks forward one hour from April to September. The fact that such a bill is necessary to conserve light (and power) and individual eye-sight and domestic expense shows what children we are. Why can we not simply get up and go to bed earlier? But, if we are going to tinker with the clocks at all or imagine ourselves 15 degrees east of where we live, why not go further and let every one enjoy the luxury of rising at 9 and retiring with the pride of being a rounder?

War Course in Dentistry. The American Institute of Dental Teachers, at its recent meeting in Pittsburg, has appointed a committee to formulate a standard course for dental colleges. Dr. Abram Hoffman of Buffalo is the Secretary. One of the things that will go far toward making the present war pay for itself is the routine reconstruction of men, with reference to teeth and other organs. The direct aggregate gain in efficiency will be an enormous credit against the charge of

war and the indirect example of the work done among soldiers will multiply this factor.

Binoculars, Spy Glasses and Telescopes are needed in the navy. It is hoped that these will be given to or loaned to the government at a nominal rate of \$1 each. There is a scarcity in the market supply of such instruments and thousands are held by private persons who have no real use for them. It is hoped that the people will respond generously. The small sacrifice is a sort of insurance against loss of ships and men by the country. One good instrument mobilized into active service may mean the destruction of a submarine and the saving of many vessels.

The National Hygienic Society asks us to publish a warning against the **Common Soda Water Glass**. It cites one carelessly washed glass that yielded 20,000 human epithelial cells and had an estimated germ population of 3 million. With personal recollection of the filthiness of some very popular and by no means low priced fountains, we acquiesce but we also wish to protest against the profiteering substitute of a piece of paraffine paper which magnifies the apparent volume and affords a very doubtful assurance of protection.

Bills in the Interests of Officers and Soldiers. The Senate Military Committee has reported favorably on a number of bills, of which the following are of special interest to medical reserve officers; though applying to all officers and soldiers: reimbursement for private property lost in the discharge of duty; continuance of pay for six months, to widow, children or other designated dependent, if death results from wounds or disease not due to misconduct. Another bill provides for paying line and department officers the same as staff officers. In regard to reimbursement for loss of private property, one should remember not only the obvious risks of service at the front but that from fire in the tents and barracks employed in this country. Private insurance for short terms, liable to termination or transfer by sudden transfer, even against fire alone, would be at prohibitive rates.

Reduction of Milk Supply Due to War. Beginning Dec. 8, the use of milk and cream in Great Britain is limited to infants, invalids and butter makers. The retail price of milk has, however, advanced only to 14-16 cents a quart. (Imperial or American not stated; if the former, the increase is only to about 12-14 cents). All over Europe, the reduction in milk production has been relatively greater than that of

cattle, owing to forage conditions and the increased shortage of meat. It is said that in France, the reduction in number of cattle is 1/7, of Milk, to 40% of the normal and that in Vienna, the milk supply has diminished from 900,000 to 200,000 liters. In Berlin, the milk supply is said to be almost exactly 1/3 of the ante-bellum standard.

It is interesting to note in comparison that the high price of milk has diminished the consumption in Buffalo by about 3,000 gallons a day and that the number of dealers has been reduced from 214 to 190 in the last two months of 1917. It is worth while emphasizing the fact that milk is not an especially good food for healthy adults, and that it is now a relatively expensive food. It is the patriotic duty of husky grown men to quit using milk, plain or elaborated into various soft drinks, as a beverage. 1/2 to 2/3 of a pint a day is an adequate allowance for adults, in cooking and for use in the ordinary table beverages.

The Glen Springs Sanitarium was reported in our last issue as having been taken over by the government. Mr. Leffingwell, the President writes us that there has been no negotiation even for the leasing of the Glen Springs. The Jackson Health Resort at Dansville, which was under the same management, has been taken over by the government.

Waste of Meat in War. Since the beginning of the war, it is estimated that about 33 million meat animals have been slaughtered and the loss not made good, on account of shortage of fodder. It is further estimated that in this country, the meat ration must be reduced about 1 ounce per capita per diem, to compensate.

The Third Liberty Loan will be offered about Mch. 1. It is estimated that about 15 million individual investors will be needed. The bonds are as nearly absolutely safe as is humanly possible. They are actually better revenue producers than any other class of conservative investments, even those involving a much higher risk for the two classes of the population who have very small and very large amounts of money to invest at any given time, or are at least equal to the best rate of interest paid by sound savings banks. By combining different forms of taxation and taxation and credit, the burden of the war is distributed as generally and as equably as possible throughout the population and over a period of years. By allowing payment to be made in installments, personal and banking monetary stringency is prevented and the money raised is returned in various

channels so as to keep it in circulation, with a minimum reserve. The taxes collected and the loans secured by the government constitute a sort of portal circulation to nourish the vital organs of the government and the precautions just mentioned prevent the possibility of bleeding the country to death into its own portal circulation. In addition, the rapid return from this portal to the general monetary circulation enriches the latter and it is by no means impossible that in spite of the obvious losses of war, a wide spread condition of heightened prosperity may be continued. We should firmly grasp the idea that money by itself is worthless. This country has more money of all kinds, actually and per capita than any other. What it needs is labor and material. Hence it is by no means undesirable that much individual sacrifice should be involved in subscriptions to the Liberty Loan. Such sacrifice means that labor at present devoted to catering to unnecessary luxury and amusement should be forced into immediately needed production and that clothing, food and various other materials beyond the actual needs of the individual should be available for the men actually engaged in the war. Even if the majority of the materials are not directly available for combatants, they are indirectly available in the raw or partially prepared state.

The Peanut Crop of Alabama, 1917, is estimated at 16 million bushels or 200,000 tons. This would furnish about 300,000,000 day's rations of 2500 calories each and would support the entire population of the country for 3 days.

The Niagara Co. Tuberculosis Hospital will be opened this spring in Lockport. The cost was \$100,000. Among the managers are Drs. Harry C. Dumville of Niagara Falls and C. T. Crance of N. Tonawanda.

Superiority of Country Boys a Myth. Contrary to the expectation at the time, it was found early in the Civil War, that boys from cities made better soldiers than country boys, largely on account of psychic factors. Many hold that the same holds good today. At any rate, on a purely physical basis, 35,017 city registrants gave 28.47% of rejections while 44,462 from rural districts gave 27.96%, virtually a tie.

Buffalo Vital Statistics, 1917. Births, 13,536, an increase of 463 over 1916; deaths 7,537, an increase of 58.

Automobile Statistics, 1916 and 1917. Owners, 213,548 and 407,022. Dealers, 2,492 and 2,727; Chauffeurs, 103,774 and

131,788. Receipts from licenses, \$2,575,111.50 and \$4,266,949.50. In 1900, there were only 954 automobiles in the state. It should be noted, however, that the receipts would pay for only about 250 miles of hard surfaced roads.

Football Casualties for 1917 totaled 12, as against 18 for 1916, 16 for 1915 and 15 for 1914. None of the past year's mortality occurred in university and college teams but was confined to high schools and miscellaneous elevens.

Automobile Fatalities, 1917. 837 as compared with 729 in 1916 and 455 in 1912. The complaint of the National Highways Protective Society that no legislation of importance had been enacted, seems to us to show a misconception. Very few evils can be corrected by law alone. More general legislation, based on common sense and experience, rather than on prejudice, has already been placed on the statute books of many states and local enforcement of existing laws is both more efficient and more rational. Two very important laws have been passed, notwithstanding the statement made. The head-light law, though still subject to variation and imperfect is certainly important. It will, when worked out by experience and properly enforced, prevent numerous ditching accidents, quite a number of which have proved fatal. It will also materially reduce the deaths of pedestrians who happen to be on the road when two autos pass at night. Legislation allowing autos to pass standing street cars, at a reasonable speed, when adequate space is afforded, though, in a sense, a letting down of the bars, has lessened congestion of traffic to a considerable degree and congestion of streets is an inevitable cause of a certain number of deaths. There has also been a marked tendency to get away from the narrow conception of preventing accidents by legislation only against automobilists and a beginning has been made in the proper direction of placing due responsibility upon pedestrians and slow-moving vehicles.

The Trial Trip of Sending Motor Trucks Under Their Own Power From Detroit to the Seaboard has been successful. We venture to state that if this state had followed the policy advocated by this journal more than three years ago of concentrating its road improvement on permanent hard-surface construction and on trunk routes and if other states had followed the same policy in co-operation, this movement would have been in no sense a trial but a foregone conclusion and would have been more successful in the sense of better time and lessened strain and danger.

The Pure Food and Drug Law. The Bureau of Agriculture reports that over 40,000 citations of manufacturers have been made, that 750,000 shipments of domestic or imported foods and drugs have been made, that factory inspections run up into many thousands and calls attention to the vast improvement after ten years of operation of the law. Unlabeled, secret proprietary mixtures have become a matter of past history, as have the worst examples of decomposed food stuffs. The states have quite generally supplemented the Nation in passing and enforcing laws. Adulteration has been reduced to comparatively harmless practices or to those in which the greatest ingenuity has been called into play to evade the laws. Honest manufacturers and even those who are merely playing safe have in numerous instances asked the assistance of the authorities against unfair competition by those who were not complying with the laws. We can remember being called visionary for suggesting that the A. M. A. or some similar body could carry out one part of all this, by at least enabling physicians to know what patent medicines contained.

Military Census of N. Y. State. Persons between the ages of 16 and 50 number 5,815,969, approximately half of the total. Males 2,914,909; females 2,901,060, the difference being much less than has usually been believed, in view of the increase of males by immigration. In N. Y. City, females predominated, 1,650,775 to 1,630,095 males, total 3,280,870. The statistics for Western N. Y. are as follows:

Counties.	Males.	Females.
Allegany	9,288	9,288
Cattaraugus	20,066	16,740
Chautauqua ..	29,362	29,623
Chemung	15,924	17,276
Erie	180,351	170,342
Genesee	9,716	9,052
Livingston	9,112	8,492
Monroe	97,406	94,890
Niagara	37,863	29,355
Orleans	7,797	6,816
Steuben	21,095	20,481
Wyoming	7,696	7,718

Horse Chestnuts have been used in Germany for food, though the extraction of the bitter principle is not economic except under war conditions. In England, they have been successfully used as a basis of explosives, though twice the weight of grain is required. It is estimated that 25,000 tons

have been gathered this year and that 8 times as much were available. Here is a practical hint to the patriotic small boys of America, for next fall.

Suit for Collection of Fee for Christian Science Treatment.

What is said to be the first suit of this nature has been instituted by Miss Grace M. Trankla of N. Y., against Clarence C. Burger, for \$12,150, for services and instruction between Apr. 1 and Oct. 1, 1917. This will bring up the question of the status of Christian Science from a new standpoint.

Attrition Statistics. We have in the past published various statistics of killed prisoners, wounded and incapacitated, etc., for various countries. The fallacy of these statistics has been shown by the fact that there has been not only a decided proportional decrease as the war has progressed but in some instances an actual decrease as the period of time has increased. At about the conclusion of the third year of the war, Germany admitted a loss of about half a million in prisoners, altogether, though the statements of the allied countries of German prisoners held by them, came to a much larger number, 1-2 million. Recently, it has been stated that the failure of the Russian offensive would liberate 2 million German prisoners (sic, not combatants on the eastern front). A request to the Official Bulletin for accurate, up-to-date statistics, has been referred in turn to the Secretary of War and to the Librarian of Congress and the latter is unable to do more than give references, mainly of the dates of 1915 and 1916. We make this statement to show the impossibility of giving information. In general, we have found that, since our entry into the war, we are getting propaganda rather than news.

Advisory Boards to Pass Upon Drafted Men. It is expected that the classification of drafted men according to dependents, etc., will be completed by Feb. 15. Adequate local boards will then be provided to make examinations for exemption of Class 1 men (and ultimately of other classes if required) with ample time for proper consideration.

Socialization of the Medical Profession of Great Britain by legislation, providing for universal free medical attendance is expected at an early date. The American profession should recognize the possibility of similar action in this country. Indeed, Health Insurance legislation in many states is either in operation or threatened and it is estimated that this will apply to 50-80% of the population. If necessitated as a war

measure, it would be an unwise and a futile policy to attempt organized professional obstruction. Rather, there should be a concerted attempt to secure fair play and reasonable demands, somewhat according to the standards of the army and navy medical services.

OUR CONTEMPORARIES

The Pacific Medical Journal, the oldest journal on the Pacific coast, which has just completed its 60th volume, has been acquired by Dr. William J. Robinson and will be consolidated with The American Journal of Urology and Sexology. The combined journal will continue under the editorship of Dr. Robinson and will be published from 12 Mt. Morris Park West, New York City.

The St. Paul Medical Journal has been discontinued in order to clear the field for Minnesota Medicine, the journal of the Minnesota Medical Association, affiliated with the bureau of the American Medical Association.

MILITARY PERSONALS

Dr. Herman Johnson of Gowanda has returned from France on account of ill health and is at present stationed at Newport News.

To Cleveland, O., Capt. Wm. B. Reid, Rome.

To Fort Oglethorpe, Capt. Frederick Terwilliger, Spencer., Lieuts. Patrick H. Buckley, Buffalo, Lee A. Hadley, Syracuse. To Fort Sam Houston, Texas, Lieut. Ralph Robinson, Belmont.

To Hoboken, N. J., Lieut. Eugene Boudreau, Auburn.

To Philadelphia, Pa., Lieut. John H. Watson, Buffalo.

To Rockefeller Institute, Lieut. Edwin Foster, Penn Yan.

To Camp Kearny, Linda Vista, Calif., Lieut. Anthony J. Grace.

To Camp Lee, Petersburg, Va., Lieut. Peter J. Barone, Buffalo.

To Camp MacArthur, Waco, Texas, Capt. Robert R. McCully, Auburn, Lieut. Hall G. Van Vlack, Forestville.

To Fort Morgan, Ala., Lieut. Maxwell K. Willoughby, Auburn.

To Fort Oglethorpe, Capt. John R. Bradley, Rochester, Lieuts. Chas. J. Brone, Julius Y. Cohen, Frank G. Walz, Buffalo, Wm. W. Carleton, Waterloo, Henry M. Spefford, Batavia, Floyd P. Breese, Elmira, Harry Wrenker, Rochester, A. C. Smith, Elmira.

Honorably discharged on account of being physically disqualified for active service, Capt. Malcolm E. House, Cuba, Lieut. George R. Stevenson, Penn Yan.

To Camp Joseph E. Johnston, Jacksonville, Fla., Lieut. George S. Skiff, Gainesville.

To Fort Redman, Lieut. Adelbert C. Abbott, Syracuse.

To Morrison, Va., Lieut. Albert A. Getman, Syracuse.

To Rockefeller Institute, Lieut. Arthur W. Hubbard, Wyoming.

To Army Medical School, Washington, D. C., Lieuts. Harry G. Johnson, Earl H. Lermer, Frank H. Long, Harold J. McDonald, Frederick E. Sperry, Buffalo, Frank H. Snyder, Geneva, John P. Sharp, Niagara Falls, Paul S. Persons, Ripley, Benjamin S. Slacer, Rochester.

To Camp Dodge, Des Moines, Iowa, Lieut. Henry W. Duryea, Buffalo.

To Camp Sheridan, Montgomery, Ala., Lieut. Edmund B. Spaeth, Elmira.

To Fort Riley, Lieut. Carl G. Frost, Buffalo.

To Fort Sill, Okla., Capt. Edwin S. Ingersoll, Rochester.

To Hoboken, N. J., Lieuts. Clark V. Fairbanks, Dansville, Milton J. Johnson, Jamestown.

To New York City, Eugene H. Beudreau, Auburn.

To Takoma Park, D. C., Capt. Edward Dowdle, Oswego.

To Williamsbridge, N. Y., Capt. James C. Davis, Rochester.

Lt. Col. E. B. Hardy of the Army Medical Corps, addressed the last meeting of the Medical Union, at the Iroquois, Buffalo.

Drs. Salvator Chas. Lopacone, Samuel Grienstein and Hiram Samuel Yellen of Buffalo have been commissioned lieutenants in the M. R. C. Dr. Louis C. Howes of Buffalo, has been commissioned lieutenant in the Dental Reserve Corps.

Dr. Harry Lee Brown, Surgeon, U. S. N., returned to this country late in Jan. and visited in Buffalo.

Major Edwin L. Beebe of Buffalo, has been honorably discharged from service, for physical reasons held to disqualify him for active service in France. He was commissioned captain in 1904, major in 1914, was transferred from the old 74th to the 12th in 1916 at the time of the call to Texan border service and was with the latter regiment throughout its stay at the border. He was again transferred to the 74th and went with it to Camp Wadsworth, last fall. We regret that Major Beebe has been disappointed in regard to foreign service but congratulate him on his honorable record and trust that he will be able to do valuable work at home, both in private life and in the home guard.

Lt. Wilfred H. Baines of Buffalo is in service in France.

Lt. Frank M. Ende of Buffalo is serving in a Red Cross Hospital in Glasgow.

Our Associate Editor for Canada, D. J. G. Adami of Montreal, is Medical Historical Recorder of the Canadian Expeditionary Forces, with headquarters in London.

PERSONAL

Announcement of removal, travel, and other matters of interest are requested. Please report errors in the listing of any physician in the State and other directories, that we may co-operate with the State Society in securing a correct list.

Dr. Harry C. Dumville of Niagara Falls has been elected President of the Managers of the Niagara Co. Tuberculosis Hospital at Lockport.

Dr. S. Tracey Hamilton, U. B. 1916, has opened offices at 52 Lake St., Elmira.

Dr. Charles Haase has been appointed Health Commissioner at Elmira.

Chemung County's Tuberculosis Hospital has been completed.

Mr. Joseph L. Turner, Head Chemist of the Bristol-Myers Co., Brooklyn, has been elected Vice-President of the New York Local Branch of the American Pharmaceutical Association.

Dr. Alfred H. Noehren announces the removal of his office and residence to 1196 Main St.

Dr. Monroe Manges is spending March in Florida.

Dr. E. W. Ewell of Lancaster, has been appointed town physician.

Dr. Renwick R. Ross, Supt. of the Buffalo General Hospital, will return this month from a two-months' trip to California.

The following appointments have been made, received just too late for insertion in the Feb. issue: Dr. George S. Staniland, member of the board of managers of city hospitals and dispensaries; Dr. Jesse N. Roe, diagnostician, temporarily, in place of Dr. Harold J. MacDonald who has entered military service.

The Dunkirk Board of Health has made the following re-elections: Dr. George E. Ellis, City Health Officer, Dr. C. E. Hallenbeck, Bacteriologist.

Dr. R. B. Wakeman of Hornell has been appointed president of the board of managers of the Steuben Co. Tuberculosis Hospital and Dr. E. E. Webster of Woodhull is also a member of the board.

Dr. Edward Clark has resumed his former duties as sanitary supervisor for the 19th district which comprises Buffalo and Western New York counties. Dr. H. F. Sinftner will be the acting director of the division of child hygiene.

Dr. Daniel Jong, Buffalo General Hospital, Dr. Frederick W. Palmer, 100 High St., and Dr. Antonio L. Baron, 246 Front Ave., have been commissioned first lieutenants in the Medical Reserve Corps.

The Annual Dinner of the Buffalo Health Bureau was held at the Hotel Iroquois Feb. 7. Health Commissioner Fronczak presided and the speakers were Mayor Buck and Dr. Albert H. Briggs, who was head of the department 38 years ago.

Dr. Fronczak said that in the past fifteen years the infant mortality rate has been reduced from 214 to 103 per 1,000 while the death rate in the past 25 years has been reduced from 23.9 to 14.21. Nine employees in the department are in military service.

OBITUARY

Readers are requested to report promptly the death of all physicians in Western New York, or former residents of this region, or graduates of any medical school in Western New York, and to notify the families of the deceased of our desire to publish adequate Obituary notices.

Dr. Edward W. Heim, University State N. Y., 1900, died suddenly at his home in Buffalo, February 16.

Dr. Andrew Kamerling, who died in Buffalo, Dec. 6, 1917, was believed to be the last surviving member of the old Buffalo Medical College, class of '66. He was born in Deventer, Holland in 1840.

Dr. Ellis W. Storms, University of Buffalo, 1900, died in Falconer, age 49.

Dr. John Bassett Chapin, Jefferson Medical College, 1853, died in Chautauqua, age 88, Jan. 17. He first recommended changes in asylum construction to provide for the segregation of the insane in detached blocks or buildings according to classes and conditions. He wrote several monographs on the care and treatment of the insane.

Dr. Robert N. Blanchard, Buffalo 1888, died in Jamestown, Jan. 19, age 62.

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ORIGINAL ARTICLES

The right is reserved to decline papers not dealing with practical medical and surgical subjects, and such as might offend or fail to interest readers. Contributors are solely responsible for opinions, methods of expression and revision of proof.

Telephone Deafness.

DR. GEORGE COTT, Captain M. R. C., Buffalo, N. Y.

A number of instances came to my notice in recent years in which people complained of impaired hearing due to shock or other causes when they put the telephone receiver against the auricle. I did not credit the complaints very much at the time but repeated similar experiences have given it a more serious aspect. Still the pathology was not clear to me until the telephone company referred several cases for examination as to the reality of conditions complained of by those seeking damages for the production of sudden deafness. Even after examination and definite conclusions that actual deafness existed, several of my colleagues contended that the particular individuals concerned were hysterical. I could not be convinced that they were not really deaf. I examined each one very carefully, noted the findings and then without making a report to the company made a second and third appointment in each case and comparing results at each sitting; I always found them the same. In each case the patient did not complain of difficult hearing before the shock was experienced.

The history stated that when putting the receiver to the ear they suddenly heard a loud high pitched sound then could not hear another thing. The condition remained without improvement for several weeks or until they were brought to my notice. Even though the cases were held to be hysterical it would have been hard to convince a jury that these people were not permanently deaf or that deafness was

feigned. If such people were examined in court with all the different methods employed by the otologist to detect malingering they could not be trapped. I concluded properly that the auditory nerve was suffering from shock which in all probability left the rest of the labyrinth intact. It is assumed when one of the six labyrinthine branches was impaired the entire 8th nerve outside of the brain suffered likewise. That is probably true. On the other hand the cochlea being the youngest in the formation is more affected and is not so ready to recover. If the vestibular apparatus were tested shortly after the injury no doubt we would find impaired function in the static as well as in the auditory portions of the nerve. If the assumption, that impairment of one branch means involvement of all is true we ought to find in case of auditory nerve affection some signs of involvement of the vestibular portion also. No patient with hysteria can evade a positive reaction of the static portion even though the auditory branch seems dead. In such cases we would be apt to produce hyper-activity of the static labyrinth either in eye movements or vertigo or dizziness; in functional as in hysteria both would produce these manifestations. Such patients could then easily become seasick or carsick, an experience which they did not have before.

But again assuming that impairment of one branch of the auditory bundle meant involvement of all branches, may it not be possible that the injury to the cochlea was carried from the end organ to the brain itself along the auditory path only, especially if there were some vulnerable point in the medulla trapezoid body or the very sensitive acoustic striae in the floor of the 4th ventricle, which injury could become permanent. In that case the static nerve being less influenced than the cochlear could more readily recover and eventually leave no trace behind. In order to make this clear let us trace the six branches to the brain: the cochlear branch, one from the saccule, another from the utricle, the horizontal, the anterior and the posterior verticle all meet in the internal auditory canal and form the bundle of the 8th nerve for a very short space when they enter the medulla oblongata; here again they divide into six branches each following its own course in separate and distinct paths.

The horizontal semi-circular canal nerve divides in Deiter's nucleus in the walls of the 4th ventricle, one branch going through the triangular nucleus to the posterior longitudinal bundle through which eye movements are produced and the other branch passing through the juxtarestiform body in the inferior cerebellar peduncle to the cerebellar nuclei.

The verticle canal branches pass through the medulla into

the pons and in its upper portion divides; one branch goes also to the posterior longitudinal bundle through which nystagmus is produced and the other through the middle peduncle of the cerebellum. The saccule and utricle acting with the other static nerves govern antro-posterior and lateral motion.

Now the auditory or the portio dura of the 8th nerve has its own path. In the medulla it divides into an anterior and posterior branch; the anterior goes to the trapezoid body on its own side then passes over to the trapezoid body of the opposite side, then to the posterior corpora quadrigemina, the median geniculate body to the subthal-amic region where by association fibers the path leads to the posterior portion of the first temporal convolution. The posterior branch passes along the outer border of the medulla and the inferior cerebellar peduncle to the floor of the 4th ventricle, then after leaving the 4th ventricle it comes forward to enter the trapezoid body. The vestibular paths leading from the cerebellum to the brain cortex is not germane to the subject. Now if we can have lesions, and we do have them, affecting the different branches of the static nerve why is it not reasonable to suppose the auditory branches may likewise be influenced separately anywhere along its path in the brain stem or higher up, to a point of degeneration perhaps beyond recovery.

This would seem to have been so in these telephone cases, always provided they do not eventually recover which I very much doubt. It is just as likely that there was a vulnerable spot along the nerve path or rather in the nerve branch itself, and if recovery after a lengthy period does not take place the diagnosis of nerve deafness is absolute. Of my own experience I should judge that recovery takes place only to a certain degree but never complete.

Finally how is this telephone deafness caused? Any interference with the line while one is listening may jar the nerve suddenly, causing a high pitched sound followed by prolonged tinnitus with immediate deafness either partial or total. After some weeks the symptoms somewhat ameliorate.

The great point in which the public is most interested is how can telephone deafness be avoided. The company is absolutely helpless and at the mercy of the victim. The company cannot avoid the accident but the telephone users can. The accident occurs in one way only and that is when the receiver is held in contact with the ear so that no sound can interfere when listening to a speaker at the other end of the line. That is a common way to use the receiver when there is much noise around. If the user of the 'phone applies the

receiver so that one part only touches the ear or the side of the head leaving a space between the ear and the rest of the instrument for free circulation of air it is impossible to transmit a shock to the nerve no matter how much disturbance there is on the line. This is actual experience. I would therefore advise the public rather to bear with a little noise than to run chances of suffering a degree of deafness which is embarrassing to you and to society in general.

My attention was first attracted by a case referred to me by the Telephone Company with a history of complete deafness following a shock while holding a receiver too close to the ear; this was accompanied by noises as the patient said, similar to the roaring of Niagara Falls. Patient was very nervous, also complained of pain since shock, like toothache. The noise in the ear is now like a steam engine.

The vestibular test now after 16 months shows improvement of function. Douching requiring 60 seconds to beginning of nystagmus of verticle canals although turning is normal 25 and 23 seconds. Deafness in the injured ear is still complete.

The second case, a very nervous female, aged 40, with apparently perfect hearing, received a shock in her left ear while using the telephone. She became totally deaf in both ears that night but the uninjured ear cleared up again within a week, the other remained deaf. She has a continuous rumbling noise. Her nervousness has cleared up in a great measure but one year has now elapsed, and she remains totally deaf in the injured ear.

The third case was a physician who four months ago received a similar shock which caused almost complete deafness in the left ear accompanied by a high pitched noise, leaving constant tinnitus ever since. For four weeks he could not use the telephone at all but recently hearing has improved so that he can again use the 'phone but hearing is still very dull and the prospect of ultimate recovery is not at all bright.

Since writing this article I have been told of other similar cases by other physicians. If the company would put up directions how to use the receiver perhaps it would do much towards preventing future occurrences and thus save money and a law suit.

State Civil Service Commission, Albany, will hold, in the early part of April, examinations for Superintendent of the County Tuberculosis Hospitals of Niagara and Steuben Counties. Salaries range from \$1500 to \$3000.

**Inflammation in the Female Pelvis Due to Infection
From Without.***

By J. HENRY DOWD, M. D., Buffalo, N. Y.

Statistics state that 85 per cent. of all diseases of the female generative organs, that 95 per cent. of all the ovaries removed and that 45 per cent. of all operations on the pelvic organs are due to gonorrhoeal infection. With the above percentages the writer would agree, but takes exception to the infectious bacteria.

Of one thing we are quite sure, it has been established that the infection follows sexual intercourse. But, as to the gonococci being the sole and only cause, such is only a fact in a small proportion of cases.

It must be granted, because it has been proven that in every case of gonorrhoeal infection in the male two varieties of bacteria are found—the gonococci, and the strepto or straphylococci; in other words, gonorrhoea is a mixed infection.

One other fact has been proven,—gonococci are bacteria that have a specific life history on the same soil. More explicitly speaking,—gonococci born on a given soil, for a time procreate and thrive; but the day soon arrives, when, if they are not transplanted to a new medium, they lose vigor, become weaklings and die; the race in the infected individual becomes extinct. No specific date can be given as to when this change from occuous to innocuous takes place, but it is safe to say that if a patient has been rationally treated and the soil restored to as near a normal condition as possible, no gonococci should be found after the fourth week.

In given cases no coitus has taken place for eight, ten, yes, even twelve weeks after infection; there was no discharge from the male, even the urine was clear, yet after intercourse infection in the female takes place. If not due to gonococci, then to what?

In fully 100 per cent. of cases of gonorrhoeal infection in the male the posterior urethra is involved and local foci of infection established. From this region 25 to 30 small ducts lead to the glandular substance of the prostate (to the acinous glands); according to recognized authorities not one of these ducts have sphincter muscles. In practically every case no barrier being thus present, it is with ease that infectious bacteria enter these ducts and are carried into the acinous glands. That gonococci are among the original invaders is not to be denied, but that they take along their

*Read at Gross Medical Club, Buffalo, N. Y.

companions, the strepto and the staphylococci is also an undeniable fact.

Another fact about this appalling condition as it occurs in women calls for explanation, that is that infection due to sexual contact is rarely seen at the vulva as in fully 95 per cent. of cases the seat of infection is at the cervix. On account of the pain (chordee with erections) or from moral impulses, the male suffering from gonorrhoea, either acute or chronic, foregoes sexual intercourse until inflammatory action has subsided or until on seeing no discharge at the meatus, or on finding the urine perfectly clear indicating the subsidence of urethral inflammation, he considers himself well. In fact, there may be no discharge and the urine may be macroscopically free of pus, yet the acinous glands may be involved to an extent that makes the possessor as infectious as though in the acute stage. Pus in the prostatic sinuses or in the acinous glands of the prostate has but two ways of escape,—either by ejaculation or by being brought forward by aid of the finger in the rectum (massage). Admitting an involvement of the glands, that the patient does not know is there, if coitus takes place he deposits the pus from them at just one place—the cervix.

We know that staphylo and streptococci are capable of producing inflammation, especially so on virgin soil and that is the soil found in the great majority of cases following marriage.

Three factors are necessary for the production of inflammation; a weakened or damaged condition of the tissues causing a lessening of resisting power, a medium on which bacteria can thrive and multiply, and, bacteria.

No one will deny that a damaged condition is produced in the surface tissues of genital organs of the female following marital relations, especially in the early days of marriage. It may go no further than a congestion, but this alone weakens the tissues and produces a medium upon which bacteria can grow. If the resisting power of the female genital tissues are well up to normal, congestion quickly rights itself. Even though pyogenic bacteria be deposited at the cervix, by aid of the Doederlein bacilli, the resisting power may prevent inflammatory infection.

Owing to the anatomical differences between the generative organs of the male and female, infection of those of the female by even acute gonorrhoea, symptoms similar to those in the male are never present. Except in a very limited number of cases ardorurinae is absent; chordee is never present; and, as to discharge, all females have more or less leucorrhoea. (As to discharge, the writer can report many

cases of leucorrhoeal discharge so profuse that it was necessary for the patient to wear a napkin all the time; these females were not married, had never had intercourse, in fact were only young girls between the ages of fifteen and seventeen; they were quite readily relieved by tonics, no local treatment was given, not even an examination was made.)

Broadly, but briefly, if constant douchings, abortions, miscarriages, and of course, new growths can be eliminated, inflammatory conditions in the female pelvis may be looked upon as due to infection from sexual contact, in which gonococci may be found in but a very limited number of cases. In a communication from Dr. Howard Kelly, some time ago he reported to me that "in fifty curettements for inflammatory conditions, gonococci were found but six times." But this one fact must never be forgotten that inflammation in the female pelvis in the absence of gonococci is in every way as dangerous as if they were present.

But it is upon the prevention of disease that medical men are today centering all their energies, and the old saying still remains true that "an ounce of prevention is worth a pound of cure."

Prevention of infection due to sexual relations, to which may be traced about 80 per cent. of the cases, can be summed up in a few words. Clean up all foci of infection in the male before allowing the resumption of sexual relations or before permitting marriage. This is easily accomplished; physicians must not discharge as well patients who have had gonorrhoea, or even a non-specific urethritis, unless the acinous glands of the prostate are found free of any inflammatory activity that produces pus; for wherever pus is found infectious bacteria are sure to be present.

The order of frequency of inflammatory involvement of the tissues in the female pelvis is as follows: Cervix, endometrium, tubes, ovaries, cellular tissue, vulva, bladder. Vaginitis is quite a rare condition because prevented by the inhibiting action of Doederlein bacillus, a normal inhabitant of the vaginal tract, undoubtedly placed there by nature to prevent the upward extension of inflammation from the vulva where even in the virgin strepto, staphylococci and other pathogenic bacteria are constantly found.

In the prophylaxis in the female the Doederlein bacillus comes in for attention; there is no doubt of the function of the Doederlein bacilli, then why should this protecting agent be washed away by constant and frequent douching?

It must be admitted that in inflammations of the cervix, endometrium, tubes and ovaries, solutions applied by aid of a douche cannot reach these infected parts; it is only in the

presence of cellulitis, or of metritis that douches, by causing depletion, have any value whatever. When douches are necessary, the patient should be placed on her back and large quantities of the solution used as hot as is possible.

In considering the treatment only a few important points will be mentioned. In a recent suit against the American Medical Association, in which the treatment of diseases of the female generative organs played an important part, all authorities called on both sides admitted that not over ten per cent. of the cases call for operation. If we can believe these eminent authorities, strictly medical measures both local and general, must hold a very important place in the treatment and cure of these conditions.

We hear a great deal now of tissue resistance,—a most important consideration, not only in people who are ill, but also in those supposed to be in perfect health. In the latter condition, the greater the resisting power, the less the liability to infection; while in the former, the nearer to normal the resisting power the quicker resolution takes place. Resistance is furnished the tissues—the flesh, blood and bone—through the nervous system; therefore, it must be quite clear that this system should receive prompt, if not first attention, in all conditions of an inflammatory nature; this is especially true in the female who, generally speaking, is far below par. The amount of resisting power present and being used is easily and quickly determined by taking the phosphatic index; its determination will be found of the greatest value, as a guide not only in cases to be treated locally, but in those to be operated upon.

CONCLUSIONS.

Prevent infection in the female generative organs by rendering the male non-infectious.

Before discharging as cured a patient who has had gonorrhoea, clear away all foci of infection; the acinous glands of the prostate are a seat of trouble in at least 95 per cent. of cases.

Whether the treatment be operative or simply local, in all cases raise the resisting power of the patient to as near normal as possible.

The quickest and surest way to promote resolution, is to place the diseased tissue in a condition to inhibit rather than to favor the growth of bacteria. This is quite easily accomplished by free elimination from the bowels, by hygienic measures, by tonics when necessary to raise tissue resistance and by local measures such as ichthyol ten per cent. in glycerine on a tampon applied every six or seven days, with iodine to the cervix and upper vaginal vault in alternation.

When douches are used for depletion, as in metritis or cellulitis, the patient should be placed in the recumbent position and at least one gallon of hot saline solution used.

9 North Pearl St.

Pneumonia in a German Prison Camp. Henri Mallie, Jour. de Med. de Bordeaux, Oct. 1917, gives his personal experience as a prisoner of war. In the prison camp of Alten Grabow, Prussia, between Sept. 1914 and Aug. 1, 1915 244 frank pneumonias, of almost typic course occurred among about 12,000 French and Belgian prisoners while among an equal number of Russians, 116 cases occurred. 10 of the former and 11 of the latter died. This represents an annual morbidity from pneumonia of about 22: 1000 for the Franco-Belgian group and of about 10: 1000 for the Russian. In contrast, the morbidity from the reports in time of peace was 4.08: 1000 for the French army, 5.5 for the Austrian, 6.3 for the German and 6.4 for the Italian. In war, the rarity of pneumonia has always been remarkable even in the retreat of the French in 1812 from Russia. In the war of 1870, the Germans noted the relative excess of pneumonia among French prisoners, as compared with that of their own men. Obviously, even under ideal conditions, which do not seem to prevail in the present war, prisoners are more likely to succumb to such a disease than troops on duty. (In this connection, the enormous difference in the incidence and mortality of pneumonia in different cantonments in the U. S. is noteworthy. The weekly statistics published deserve careful consideration. Camps of approximately the same population may show more pneumonia deaths in a single week in one than occur in the whole period of training from all causes, in another. Just as one is about to announce his conversion to the old view of pneumonia as a disease due to exposure, the checking of what threatens to assume the magnitude of an epidemic by a cold snap throws him to the opposite extreme of regarding the disease as practically as well as theoretically, an infectious fever and then the institution of measures designed to prevent chilling has such a beneficent action that the pendulum of opinion swings back again. Ed.)

Cholesterol. G. Luden, Jour. of Lab. and Clin. Med., Nov. 1917, compared, in 748 blood examinations, Bloor's method of quantitation with sodium ethylate as originally practiced, and his modification dispensing with this reagent. The original method always gave lower estimates, the difference being most marked in icteric blood in cases of obstructive jaundice.

**Notes on the Medical Military Course at the
Rockefeller Institute.**

(Medical Officers are frequently ordered to institutions for special training. On their return to ordinary duty, they pass on the information by lectures and demonstrations, attendance on which is obligatory, though appreciated by most men as a privilege. The following are published by courtesy of the lecturer and with the approval of the Commandant of a Base Hospital).

BACILLUS AEROGENES CAPSULATUS. The natural habitat is the intestine of man, the dog and cat and other domestic animals and it is found in soil polluted with excreta, thus being especially prevalent in Belgium and northern France, along with the tetanus bacillus. During the first two years of the war, there was a high mortality from gas bacillus gangrene, especially after wounds from shrapnel, etc., which tend to blow fragments of soiled clothing or the soil itself into wounds. The bacillus grows very much like the Klebs-Loeffler, i.e., in a sense purely locally without invasion of the blood, but with extension along exposed surfaces, in the present instance especially fascial planes. In both diseases, the toxins are freely absorbed and produce profound depression. Locally, a marked oedema is produced, followed in a few hours by gangrene of the subcutaneous and muscular tissues which are ultimately reduced to a pulp. Efficient antiseptic treatment requires complete exposure by free incisions; for instance in a wound of the thigh, a long longitudinal and a transverse incision.

There strains of gas bacillus may be recognized, from each of which an antitoxin has been prepared after methods analogous to those for diphtheria, but it has been found that the antitoxin from any strain protects against all. Three times the lethal dose of toxin plus the antitoxin fails to cause death in guinea pigs, etc., and the practical therapeutic test is satisfactory. Owing to the universality of danger of gas bacillus and tetanus infection along the western front, a combined vaccine and antitoxin will be used.

The first human case treated with gas bacillus antitoxin was that of a boy of 16, who sustained a compound multiple fracture of the lower end of the left humerus and the olecranon. He had marked gangrene with the line of demarcation just above the condyles of the humerus. The temperature was over 105, the pulse 150-160 and the patient was unconscious. This was a case in civil practice. Dr. Welch injected the antitoxin subcutaneously and also in a ring above the line of demarcation—this latter procedure not being now

considered necessary. In 7 hours, the temperature had fallen to less than 100 and the boy became conscious and demanded food. The next morning, amputation was done and recovery ensued.

The possibilities of anaphylaxis were brought out in the discussion. It was stated that, in the battle line, this would have to be disregarded. Anti-anaphylaxis could theoretically be secured by the use of a drop of the antitoxin every fifteen minutes for 4 to 5 injections but the delay would render this precaution out of the question in military surgery so that the slight risk of anaphylaxis must be incurred.

SHOCK. Whether due to haemorrhage or traumatism generally, or psychic, as in so-called shell-shock, an intraspinal injection of 3 c.c. of 1:1000 adrenalin solution is recommended. This will raise the blood pressure in a few minutes and will maintain it at normal from 1-1½ hours, when other measures may be employed. The solution is heated to drive off the chlorethane used as a preservative, as otherwise depression might occur.

SUSPENDED RESPIRATION. A box, about 45 c.m. square, with a hinged bottom and slit rubber neck piece adjusted loosely, is placed over the patient's head. Carbon dioxide is introduced through a tube from a cylinder and respiration is stimulated by the temporary exclusion of oxygen. This method should probably not be used in cases directly due to asphyxiation.

FRACTURES. An effort is being made to standardize the treatment so far as possible. It is expected that a large percentage of the cases encountered will consist of compound comminuted fractures. Those shot in the abdomen and chest will figure to a less degree in the hospital statistics because such wounds will result fatally in most instances and especially unless the line is advancing rapidly in an attack so that the wounded can be picked up promptly.

The Thomas splint has, so to speak, been reborn. This consists in a curved rod to extend the length of the lower limb, with a ring at the top to pass around the thigh and to be supported largely from the ischium. It is used simply to immobilize; is to be applied at first dressing station; the patient is not to be removed from the original stretcher nor the splint removed till the base hospital is reached. Some modification of the Hodges splint, affording immobility of the fracture and relatively free mobility of the limb or body generally, will then be employed. Or the Balkin frame, perfected by several Americans, will be used.

CAREL-DAKIN TECHNIC. There has been a general misunderstanding that the authors of this method have in-

sisted on its absolute perfection and that it is the sole method to be applied. They do not by any means declare that it is the last word in antiseptic treatment. What they do claim is that after Carel, Dakin and several French surgeons had experimented with over 200 different antiseptic solutions, this technic gave the best results in an average series of cases, especially when a routine treatment was employed without regard to special circumstances. The idea is the fundamental one of Lister, Pasteur and others, to render a septic wound aseptic by some substance freely soluble in the secretions, without introducing a generally toxic chemical nor one that will exert a depressing action on healthy tissues, and incidentally, the substance must not cause pain. The antiseptic action is a chemic process proceeding in the protein of the germs themselves. The practical test of the method is that in the second and third years of the war limbs were saved in 70% of the cases that required amputation in the first year. The solution is practically painless, odorless—a noticeable contrast to the experience in wards of similar cases under other methods—and a healthy granulating surface is rapidly achieved. The statement that wounds thus treated have the appearance of post-mortem specimens is not true.

On dressing the wound, smears are made from whatever sites still show small sloughs. 60 germs in a field are counted as infinity, an average of one to five fields as zero. Cocci and bacilli are distinguished, and all bacilli are considered as probably gas bacilli so that the infection would be rated as infinite, however small the count, so long as bacilli are present at all in five fields.

At the Rockefeller Institute, the nearest approach to war conditions, included compound fractures due to machinery, automobile accidents and the like, in which the wound was ground into street dirt. The wounds are freely incised and every particle of foreign matter and necrotic tissue picked out. Bone fragments are also removed, unless considered "orthopaedic," including both those with adherent periosteum and those necessary to serve as a wedge to hold other fragments in position, even though themselves devoid of periosteum. Foreign bodies and dirt must be sedulously removed from the medulla. Haemostasis must be as nearly perfect as possible, since neither Dakin's solution nor dichloramine T has any appreciable action on blood clot. When properly prepared, the wound resembles the clean surface of a piece of beef steak. The Dakin tubes are then introduced so as to reach every pocket and crevice, the number depending upon circumstances. A very small compress is applied

and about 4 layers of gauze are laid on loosely before applying the retentive bandage.

As Dakin's solution produces a little dermatitis in a few instances, the skin is covered with a single layer of thick-meshed, sterile, vaseline gauze. No drainage is used with Dakin's solution but it is used with dichloramine T.

The pad is made of two layers of half inch absorbent cotton and one inch of non-absorbent cotton outside, held in place with a little gauze bandage and the whole dressing is secured by small clip clothes pins such as may be obtained at 5 and 10 cent stores.

At ordinary room temperature, a sufficient quantity of Dakin's solution is introduced to wash out the secretion from a wound and this is repeated every two hours, it having been determined that the action is practically continuous for this length of time. The dressings are changed every day and the cultures are made every second day. Cotton is used for sponging, instead of gauze, to prevent irritation and, as it is generally recognized that it is extremely difficult to sterilize the skin absolutely, care is taken not to reinfect the wound from the skin in sponging.

The criticism that drainage is not provided is answered on the ground that necrotic material is removed in advance and that haemostasis is practically perfect, while chlorine is generated for a period of $1\frac{1}{2}$ hours on the average. The use of the method in bed sores was considered advisable but with due regard for the fact that the myelitic element usually present would probably prevent the restoration of the trophic function.

Chorea Cured by Spontaneous Abscess. Grenier de Cardenal, Jour. de Med. de Bordeaux, Oct. 1917, reports the case of a soldier aged 19, who developed polyarticular rheumatism in Jan., rejoined his command in March, and a few days later developed choreic movements of the maxilla and tongue, which soon became general. By May, he had reached a condition of profound malnutrition with the skin of almost the whole body covered with ecchymoses and excoriations and an abscess formed on the dorsum of the foot. It was opened and began to heal in a few days, the chorea disappearing and rapid recovery from the general lack of nutrition occurring.

Citric Acid in Urine. S. Amburg and W. B. McClure of Chicago, Am. Jour. of Physiology, Nov. 1917, have applied the Kunz method to the quantitation and find that at all ages, citric acid is eliminated in the urine, varying from 21 to 50 m.g. per 100 c.c. or, approximately $\frac{1}{5}$ to $\frac{1}{2}$ gram per day.

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The Military Status of the Medical Profession.

It may be claimed that our profession is unique among occupations, in regard to the honor shown it and the demands made upon it by the military authorities of the nation. While, both for strictly military appointment and for various services needed by the government, the special training and ability of individuals is duly considered, there is, in general, no official recognition of vocation, license to engage in a certain line of work or technical graduation, except for medicine, including dentistry, veterinary medicine and nursing, which are made auxiliary branches of the medical service under the control of the Surgeon General. Chaplains are, to a large degree, analogous, but there are considerable differences as to status in the military organization, as to the enforcement of demands upon the clergy for military service, in regard to the insistence upon technicalities of institutional training, etc. A very practical difference exists also in the fact that while there are even more clergymen of all kinds than physicians, and especially in proportion to the number of the population requiring their services, probably not more than a tenth as many will be required for the army and navy. Thus urgent problems of demand and supply will hardly be possible. Again, the peculiarly personal relation between clergy and laymen is such that problems as to maintenance after the war will not be so pressing as for the medical profession, and this fact has an important bearing on the problem of demand and supply.

It might be argued at first thought that an analogous con-

dition exists with regard to the Judge Advocate General's Dept., but, while the emergent appointments to this Dept. will undoubtedly be drawn from the legal profession, we do not understand that the existing regular army officers are necessarily lawyers in the professional sense, their number (13 last year, with no enlisted personnel) is and will be small and, up to recently, the requirements for admission to the law have been very informal in comparison with those which have applied to the medical profession for so many years as to include almost every extant member of that profession. Somewhat the same reply might be made to a similar objection on behalf of the Corps of Engineers. For the other special departments and corps of the Army and Navy, as well as for the line, no claim of technical institutional training, possession of a degree and of a license, can be raised except as a quibble of words, to establish an analogy to the status of the medical profession.

The unique position of our profession is one to be proud of. It also bears heavy responsibilities. As has already been pointed out, the military force at present contemplated or, at least, publicly announced, demands about 15% of the entire medical profession, without regard to sex, age, physical condition or adequate reasons for exemption. It demands at least 25% of the actual practicing profession theoretically available. If the normal militia strength of the nation should be called upon (approximately 10%, 10 millions) probably every practically available physician would be called into service. This statement does not include the men already enrolled in the Army and Navy and the corresponding organized militias, on a peace footing, nor the physicians already employed by the government in auxiliary capacities. It is said to be literally true for France, and is probably either literally or practically true for the other continental belligerents, that every physician is now a military surgeon, though, of course, many are detailed for absolutely necessary service to the civil population.

Any such statements imply that the demands upon our profession, for all the countries involved, are and will continue to be nearly or quite ten times as great as upon the population generally, unless, of course, the maximum man power is called into service. They also imply that, even at the outset, the age limits and exemptions for the population generally cannot apply to the medical profession. Under present conditions, the average age at which a man enters the medical profession, is 26-27 if interne service is included. The number of physicians under 25 is very small while, absolutely or relatively, the number corresponding to the gen-

eral draft age limits is scarcely half that contained in any similar average group of the male population.

This demand on the profession has been very nearly met by the volunteer system, and we trust that it will be fulfilled on this basis. But let us not be blind to the fact that, behind the volunteer system is the potential necessity and, therefore the potential power of the draft. Such a draft, if the full military strength of the nation should unfortunately be required, could scarcely be termed selective. In such an event it will be sweeping.

Right here, an extremely interesting problem arises. If urgent need arises, what will be the status of the non-practicing physician? We do not mean the man retired on account of full age, but those voluntarily retired at earlier ages, those who are teaching, conducting sanitariums, manufacturing drugs or acting as agents, or engaged in such extra-medical vocations as teaching, real estate, law, selling automobiles, making candy, running theatres, holding political offices, dealing in tea and spices, etc? How will this status differ as to whether the man was merely graduated, whether he was graduated at a time when graduation with or without formal registration constituted a license to practice, whether he was also formally licensed by some state board, whether he never practiced at all, or only as an interne or as an assistant to another physician, or in some official capacity, whether his status was ethical or unethical, whether his abandonment of practice was recent or remote? It is easier to raise such questions than to answer them, but they are no more impracticable than the establishment of principles relative to aerial navigation a few years ago, than the establishment of the Medical Reserve or any other question of preparedness against an unrealized emergency.

TOPICS OF PUBLIC INTEREST

Attending Physician's Right to Fee as Expert Witness. *Birch vs. Lees*, N. Y. Appellate Div., 165 N. Y., Supp. 846 and other cases cited, hold that the mere fact that a physician was an attendant and called to testify partly of questions of fact and ordinary observation, does not prevent his drawing a fee as an expert if asked to go beyond the statement of facts and to draw technical inferences and conclusions.

Massed Psychology as a Military Asset. Dr. John H. Quayle of Cleveland, at the annual meeting of Life Insurance Presidents, in December, called attention to the stimulating influence of the massing together of men in military canton-

ments, to the possibilities of using this influence for raising the standards not only of brute courage or even patriotism, but of mental strength generally, and of continuing this influence into times of peace. We are too prone to a pragmatic disregard of psychic power, sensibly directed and using the term itself in a sensible way instead of relegating it to cults founded on ignorance and superstition. The war arose from a mental process, it must be won by psychology directed along rational material lines. Pessimists have been alarmed at moral and especially venereal perils that they imagined would be increased because aggregated. They do not realize that a military exigency has not only called attention to physical defects but has remedied them, by operations of all sorts, by medical treatment and by sanitation and hygiene, not only enforced by authority but impressed on men who would otherwise never have learned the needed lessons. This course has followed the line of "one man at a time" but has been directed by a systematic study of large and small units. With an almost constant association of one medical man with an average clientele of less than 200, with the same association of an intelligent officer with about a tenth of this number and with every man, however ignorant, still more closely associated with his fellows, most of whom are intelligent enough to absorb the medical information constantly drilled into them, some two million young men from all parts of the country and all grades of the population have been raked over with the utmost care for weeks and months. In the aggregate, the constructive work along purely physical lines has been enormous. True, many cases are hopeless from the military standpoint but many are started on the road to physical health before being discharged and when discharged, the great majority have plainly put before them the means of physical reconstruction or of meeting incurable physical handicaps in the best possible way. The same information is available, from the military records, for public and private philanthropy.

The work done by the psychiatric board is, possibly, still more important in detecting essentially mental and neurotic conditions, in remedying them when possible, in calling attention to the necessity of some sort of guardianship in more severe cases. To a large degree, it has been demonstrated that unfitness for military service aside from gross physical and easily detected mental defects, is due either to neglected syphilis, resulting in central nervous lesions, or to essential psychic failure. Just as in the last few years, it has been shown that much of the evil of prostitution depends upon failure of mental development beyond the standards of child-

hood, so the psychiatric boards have proved that analogous evils in the conomic and social life of males—of course, directly reflected also upon the other sex—are equally important and probably depending in about the same proportion upon mental factors. The excuse offered by many for not enlisting, that the war should be fought by those out of work and without responsibilities, has been most emphatically rebutted by the experience of these boards. The men recommended for S. C. D. proceedings (discharged on Surgeon's Certificates of Disability) are, barring gross physical defects which should never have escaped examining boards, very largely those who have been unable to hold their jobs by reason of inherent and unrealized mental defects.

But, before reaching the stage of actual physical or mental deficiency, we have the men with a streak of yellow in them, the thoughtless, ignorant and selfish, the unpatriotic, the shirks. These men are poor soldiers and bad citizens, they are even to a large degree in bad health or liable to become so simply as the result of bad mental self control, yet they are not absolutely defective either physically or mentally, from the military standpoint. Held under military discipline for a few weeks or months, what happens? Before answering this question, two facts should be distinctly understood. Military discipline now means something much broader than most of us have understood the term. It means that every influence for physical, mental and moral health is placed about the soldier and that every influence and authority is exerted to impress these influences on him. When we say **mean**, we **mean mean**. Those who think that Uncle Sam is four-flushing in commissioning chaplains and recording the religious preferences of soldiers on his official blanks, in giving place to the Y. M. C. A., K. C., Red Cross, in restricting leaves of officers and men, in commanding abstinence from alcoholic liquors, in inviting prostitutes to leave the vicinity of camps, are mistaken. The other fact is that the optimists who held that the general average of morals, patriotism and intelligence of our young men was reasonably high, are right. Thus, we get an idea of what Dr. Quayle implies in his term "massed psychology." The tendency is to eliminate the waste products of faulty psychic metabolism, to clear out a mass of uncleanness and to bring about a state of psychic health, exactly as happens in purely physical ways under the hygienic, sanitary and curative direction of the medical corps. Of course, as in physical conditions, there is a residuum of the hopelessly depraved. This is eliminated gradually for the man who wont be a good soldier is ultimately certain of securing his discharge—though not necessarily

with the freedom for pursuing his low inclination in the safety of civil life which he craves. We may be appalled at knowing statistically the percentage of physically defective young men in the country, at knowing just what percentage is mentally deficient, at having dumped back from the army, the cowards and weaklings but we are far safer to have all these classes segregated, at least potentially.

Food Prices. The State Commission has published wholesale and retail prices, the former more or less subject to regulation, the latter not susceptible of control except by the general regulation of profits introduced as a war measure but proposed as a guide to consumers. While radicals may hold that absolute fixation of prices should have been legalized, it should be remembered that the gradual rise in prices before the war was due largely to false pride which prevented purchasers from applying to foods the same business-like bargaining which they practiced for certain other necessities of life, notably rentals. Thus, in putting it up to the ultimate consumer to insist that the retailer should hold the retailer to a fair profit, and should stand between the consumer and the wholesaler in a determination to hold down prices, the best leverage for permanent results is provided. The prices proposed render it possible, by using wheat and the cheaper cereal products for half or three quarters of the ration, by limiting meats to the provision of the optimum minimum, by avoiding large quantities of innutritious vegetables, still relatively cheap by the pound, but never economic in proportion to their food value, and by a judicious selection of fruits, to set a very appetizing though plain table at 20-25 cents a day.

Conservation of Philanthropic Effort. We have several times alluded to the enormous waste of effort and money by the haphazard undertaking of all sorts of worthy causes by all sorts of private organizations, in time of peace. The stand taken by the government authorities in regard to concentration of certain lines of private philanthropy in the Red Cross is well known and while it is disappointing to some, the wisdom of the course is beyond dispute. One of the strangest campaigns is that undertaken by an organization of young women, to secure funds to enable them to stamp out the venereal peril. Just how any campaign with this end in view, is necessary to supplement the military efforts, which are as efficient and as practical as can be devised, is an open question—unless indeed one to force negligent civil authorities to carry out the letter and spirit of existing laws.

It is especially difficult to explain the method on which a number of young women would actually carry out such a campaign. The only explanations that we have heard are too cynical to repeat.

Caloric Value of Wood. In view of the propaganda to save coal by burning wood, whenever available, it is interesting to note that hickory, oak, beech, birch, hard maple, ash, locust and long leaf pine (containing much resin) weigh about 2 tons per cord and have a caloric value of about half that of coal. Short-leaf pine (not so resinous), hemlock, sycamore and soft maple weigh $1\frac{1}{2}$ tons per cord and about $1\frac{1}{2}$ cords are required to equal a ton of coal. Cedar, redwood, poplar, cypress, catalpa, Norway pine, spruce, and white pine weigh about 1 ton per cord but 2 cords are required to equal a ton of coal. Dry wood is, of course, richer in calories than moist, unless the "moisture" consists of resin. As a general rule, weight for weight, most woods have about half the heating power of coal.

Income Tax Statistics 1916.

	Per Mille
Over five million	10
One to five million.....	196
200,000 to 1 million.....	2,238
150,000 to 200,000	1,284
100,000 to 150,000	2,900
50,000 to 100,000	10,452
15,000 to 50,000	59,311
10,000 to 15,000	45,305
5,000 to 10,000	150,551
4,000 to 5,000	72,027
3,000 to 4,000	85,122

(Discrepancy noted) 437,036 17.4

355,107 of the payers are married men; 47,461 single men; 26,833 single women; 7,635 married women making separate report. The average family consists of about 5 members and it may be assumed that the income of the head of the family fixes the financial and sociologic status of the whole family. However, the additional incomes reported make it necessary to assume that, in the financial sense, the average family consists of only about 4 persons. This corresponds quite accurately with the priori probabilities based on age, sex and incapacity, that about 25% of the population consists of wage-earners or responsible sources of family income and the column of per mille distribution of wealth is computed on this basis, namely of 25 million average families from the

standpoint of source of income. According to these statistics, rather less than 2% of the whole population can be considered as even well-to-do—and note that we are dealing with average family groups, not with individuals—or can maintain the standard of living. philanthropy, automobile upkeep, travel, generally accepted as “normal.” There is a discrepancy somewhere.

Buffalo Water Supply. After checking up the waste of water, Buffalo having enjoyed for many years the record of having the most liberal—or, according to some, the most exaggerated per capita water supply of any city in the world—it has been shown: 1. that either the recent 1-million-dollar intake system or the older one is adequate; 2. that, under ordinary conditions, the water is practically the same whether it flows through a pipe from the end of Lake Erie or in its natural middle channel in Niagara River to the former intake; 3. that, while under abnormal conditions, as disturbance of currents by winds (acting by changing levels rather than by actual blowing of water) the more recent method affords dangerous or suspicious water less frequently and for shorter periods; it does not even in the practical sense afford an adequate guarantee of purity. The chlorine method has given quite satisfactory results but is not ideal from any standpoint and, apparently the only radical solution of the problem is to institute a sand filter somewhere, there being neither a cheap and convenient source of sand nor a cheap, unoccupied place upon which to establish a filter. In short, we have wasted 7 million dollars, representing dead capital investment of about \$15 per capita—men, women and children—on a temporary expedient which has not even temporarily obviated the necessity of additional measures toward water purification and which has, at most, afforded insurance against failure of supply from conceivable causes which have not materialized. Possibly, by universal antityphoid vaccination, we may ignore minor impurities and be contented with a fairly good natural water. At present, sanitarians are loath to subscribe to such a course. If we accept the general view that sand filtration is the only efficient method, we are compelled to face engineering problems of great magnitude and expense. So far as we are aware, the following are the main solutions proposed: 1. Ignore Lake Erie altogether, secure an entirely different water supply from surface drainage, at a distance, which will reach the city without pumping on account of original higher level, but which will involve enormous expense for drainage area, impounding and conveyance by pipe lines or aqueduct;

2. Artesian wells; 3. Secure at practically no cost for site but enormous cost for preparation a sedimentation and filtering area in the upper part of Niagara River; 4. Condemn land expensive on account of improvements, at or near the present pumping station or reservoirs; 5. Establish new reservoirs or subsidiary pumping stations at a considerable distance from the present ones but somewhere within or near the present city limits. On general principles, it might be suggested that the first alternative could be modified by sacrificing water head, saving distance of conveyance and pumping from a nearer area of drainage and impounding but there does not seem to be any such site which is not occupied by villages of such magnitude that the expense would far exceed the first alternative as stated. We trust that the problem will receive the attention of the medical profession. It is exceedingly complicated and requires long study from all aspects.

Psychiatry—Its Military Importance. In the British army, it is said that the discharges for wounds and for disease are about equal and that neurasthenia, including shell shock, amounts to 8% of the latter. In the first 2½ years of the war, 8,000 cases of epilepsy were discovered—approximately 2:1000. While definite statistics are not available and probably will not be till after the war, it is safe to say that this subdivision of neurology has developed an importance not previously realized by the medical profession in general. Cases of deficient mentality, hysteria, etc., have, of course, passed ordinary examining boards while more marked physical defects and such diseases as tuberculosis in moderately advanced stages, have been excluded at the outset. It is not at all surprising that the strain even of camp life and especially nostalgia should bring cases of essential mental deficiency to the attention of company commanders but it is surprising to many complacent physicians to find that the discharges for this reason exceed those for incipient—and possibly exacerbated—tuberculosis, venereal disease, gross physical disability, etc. Another surprise is that quite a number of men of undeveloped mentality have attained the rank of corporal or sergeant or even have received commissions. Quite well marked insanity has also manifested itself in quite a number of cases, though comprising but a small fraction of a per cent of all troops. The unfortunate experience with these hitherto unnoticed cases, in mobilization camps, arouses wonder that the Germans should have experimented with the use of persons known to be insane as combatants. We can heartily agree with the German dictum that they are a nuisance at the front. The psychiatric boards

have called attention to the gradation from actual malingering through all sorts of hysterical manifestations in which the neurotic manifestations are not even indirectly dependent on this element. In one instance, a man had deliberately concealed the fact that he had been in an insane asylum, so that he might enlist. His conduct had been so good that he had been made a sergeant and his condition of dementia precox had been discovered only after he had been sent to the hospital for an organic disease of quite different type. Many a normal individual should take his hat off to so heroic a defective.

Variola and Race Discrimination. It is noteworthy from a legal standpoint, in view of the constitutional provisions against race discrimination, that the N. Tonawanda Board of Health has ordered all negroes to report for vaccination or leave town. The order is justified for the practical reason that 39 cases have been reported in Buffalo, 2 in Niagara Falls and 1 in La Salle (up to Dec. 1) and all among negroes.

War Activities in Regard to Tuberculosis. The Bulletin of the National Assn. for the Study and Prevention of Tuberculosis, suggests some excellent though obvious methods of education. We rather question, however, the wisdom of attempting to educate the soldier, including the medical military officer, through non-official channels, such as the Y. M. C. A., K. of C. or moving-picture entertainments, unless assistance is directly requested by the authorities along definite lines and in particular instances. The government is, officially, putting into execution the most elaborate and practical system for dealing with the tuberculosis problem.

Alfalfa Flour, cooked in various forms about as wheat flour and alfalfa candy made from glucose prepared from the stalks, has been made available. These preparations are said to be palatable but this is no time for fooling ourselves by false economies, physiologic or financial and we trust that thorough, practical tests will be conducted to establish nutritive value and that the price will be set so as to conform to the average for cereal preparations generally.

Negroes in the Medical Reserve Corps. 30 were appointed about Jan. 1.

Mental Defectives discovered by psychiatric boards of the army, amount to about 1% of the total passing physical examinations. The practical impossibility of discovering and

rejecting these men at the initial examination is illustrated by the fact that quite a number have become non-commissioned officers and a few have received commissions. A good many of the defectives are highly patriotic and make good soldiers until a certain degree of strain is reached, including stration of the psychiatric boards is that the defectives are that of monotony of service. One immensely valuable demonstration largely made up of men who have not held their jobs. The plea that the army should be drafted from men out of work is thus negated. Perhaps even more important is the hint as to the correction of the economic evil of lack of employment in peace.

Berlin Food Prices. Butter, \$2.25 a pound, sugar 56 cents, ham and bacon \$2.11. American soap sells at about 22 cents a bar.

Centenarians. David Mosher of E. Aurora, died Nov. 18, 1917, aged 100 years, 7 months and 22 days. Mrs. Samantha Nellis of Naples, born in Herkimer Co., N. Y., celebrated her 100th birthday Jan. 8, 1918. She is in good health. Mrs. Hannah Gibson Leslie of Jamestown, widow, celebrated her 100th birthday Dec. 31, 1917. Mrs. Mary Wright of Buffalo, whose will in 1893 stated that she was sick and about to die, survived till Sept. 22, 1917, when she did die at the age of 107.

Triple Typhoid Vaccination is asserted by the National Anti-Vivisectionist Federation to be responsible for death and disease in soldiers at cantonments and the blame is placed on Surgeon-General Gorgas. Or rather, serum inoculations are stated in general terms to be the cause. So far as we have learned, triple typhoid and anti-variolar vaccination are the only procedures to which the more general term can be applied. Other procedures, such as the use of antimeningococcus serum, diphtheria antitoxin, etc., have been applied only when the corresponding diseases have developed, and the mortality has been lower than in older series without such treatment. There have been a few cases of quite sharp reaction to the prophylactic vaccinations universally practiced, but so far as we have learned, no fatalities or even alarming cases. Typhoid has occurred in small proportionate incidence and in mild form with low mortality, mainly at the beginning of cantonment mobilization, i.e. introduced with the troops. In some cantonments the typhoid wards have been empty after the first few weeks. Smallpox has been almost nonexistent. The only diseases which have occurred with marked

frequency have been pneumonia, ordinary colds (infectious, undoubtedly), measles including German measles, venereal diseases, which have shown a marked decline as time has elapsed, and which probably not even the antis would ascribe to the prophylactic measures against smallpox and typhoid and the para-typhoids, and, in a sense, meningitis. We say "in a sense" because the ideal of the Medical Service is to eliminate this disease. It has not developed to the extent formerly taken as a matter of course, and the mortality and paralytic developments have been low. Even if there were any reason to assume that anti-variolar and triple typhoid vaccination were in any way responsible for measles, pneumonia, colds and meningitis, the balance between the mortality from all these diseases together, and the probable mortality from smallpox and typhoid without vaccination is in favor of the continuance of the prophylaxis. One point that seems to have been generally overlooked is the childishness of regarding these vaccinations as serious procedures.

Dogs. The state system of licensure has shown that taxes were paid on 282,243 dogs last year. Only 950 claims of damages were made, amounting to \$77,862. According to the ordinary ratio between claimed and actual damage, it may be estimated that the average dog did about 5 cents worth a year. 2,951 sheep were reported killed and 12,692 injured or worried. When, without hearing the other side of the question, it is claimed that there was one sheep killed for approximately 100 dogs, the exaggeration of this danger is apparent. It is difficult to estimate how many sheeps' lives were directly or indirectly saved by dogs, or how much human labor was saved in herding sheep and cows but the balance is obviously to the credit of the dogs by a wide margin. On a farm carrying 100 sheep and 10 cattle a good shepherd dog—not necessarily of the breed thus known—will easily save a third of a man's time. Some sort of statistics ought to be gathered of the saving of human life and property by watch dogs.

Weekly Death Rates. The Bureau of the Census now issues sheets giving the deaths and rates for all principal cities of the country by weeks. On account of marked changes in population, not even subject to check by estimates, we do not attempt to publish these statistics but suggest that anyone especially interested should apply for these reports.

Mortality Statistics, 1916, Registration Area. This area now includes about 70% of the population and the total num-

ber of deaths was slightly over a million, about 14:1,000 population. Tuberculosis fluctuated about 2:1,000 until 1904 and has gradually and apparently genuinely declined to 1.416:1,000. Pneumonia shows marked fluctuations, averaging a little lower than tuberculosis. Bright's disease, cancer, diabetes, apoplexy and notably arterial diseases 6.1 in 1900 to 23.9:1,000 in 1916, have increased, probably partly due to gradually increasing age, largely to refinement in diagnosis, although the last disease is rather a matter of conception and nomenclature than actual detection of a condition. Diphtheria has declined from 0.433 in 1900 to 0.145:1,000. Typhoid from 0.359 to 0.133. Measles, pertussis, scarlet fever, etc., fluctuate considerably but it is worth remembering that, with the exception of "influenza" none of the ordinary acute infections reaches a mortality rate of 0.15:1,000. Just about 6% of all deaths are by some form of violence. Those due to railroads run about 10 per hundred thousand population; those due to street cars about 2.5, a gradual decline, while those due to automobiles have increased from 0.4 in 1906—the first year for which they were separately recorded—to 7.3 in 1916.

Salvarsan patents have been abrogated by the government and firms will be licensed to prepare this drug under the name of arsphenamine, subject to rate control. From an ante-bellum price of \$4 per dose, up to a rate of \$35 due to inadequate supply, the price will now drop to \$1 for the army and navy, \$1.25 for hospitals and \$1.50 for physicians and it is asserted that an abundance will be almost immediately available.

U. S. Victims of Shell Shock Have Arrived. The first U. S. victims suffering from shell shock and mental disorders have been brought to Fort Porter, Buffalo, and to Fort Niagara, Youngstown. These sufferers will be given the same course of treatment in use abroad.

Glens Falls is the first of the third-class cities of the state to have a full-time health officer, Dr. Virgil D. Selleck, at a salary of \$3000. It also maintains a public health nurse and a tuberculosis dispensary. The population is a little less than 17,000.

Typhoid Fever has Declined in N. Y. State from a little over 30 deaths per 100,000 population to 5.8 in 1917. For the last 10 years the average was 11, for the 17 years from 1885 to 1907, 23.

Accidental Poisoning kills about 5000 persons in this country, annually, according to the Surgeon General of the Army. A special bottle is suggested, with skull and cross bones molded in the glass so that they can be felt in the dark, is suggested.

Military and Preventable Deaths. Some one has calculated that 7 million have been killed in the present war, in all the countries engaged and that $6\frac{1}{2}$ million die in the same countries from preventable causes every year.

A Universal Reserve Corps. The matter is being seriously considered of making every physician a member of a reserve of the reserve corps. Potentially he is so already just as every citizen is potentially liable to compulsory service in one way or another.

Premier Georges Clemenceau of France, born in 1841, was a physician and the son of a physician. He practiced in N. Y. City between 1865 and 1869 and is also said to have practiced in Stamford, Ct. It is said that he failed in his professional career, but so does everyone who does not continue in it. The same statement was made of the late D. Hays Agnew of Philadelphia, who left medicine for business early in life but later returned to his practice and became one of the world's most noted surgeons.

Increased Rank for Medical Corps and Medical Reserve Corps of Army. Senator Owen's bill has been reintroduced, Representative Dyer introducing the bill in the House. In its amended form, the bill follows the provisions for the Navy, decreasing the lieutenants and captains from 67.2 to 64%, majors from 23.7 to 23.5%, increasing lt. colonels from 5.42 to 8%, colonels from 3.16 to 4% and providing for 0.5% brigadier generals. The ranks beyond major are opened to the reserve also. It seems to us, that merely from the standpoint of efficiency, it is a good plan not to have any large number of men feel that they have no further advancement in prospect.

Some Modern Military Statistics. Bayonet wounds, in the Civil, Balkan and present war, have usually proved fatal so that they figure to a small degree in the statistics of wounds treated (about $\frac{1}{2}\%$ in the Civil War). In the Civil War, about 8% of wounds were due to artillery, 92% to rifle bullets. In the Balkan War, artillery wounds comprised about 25% and this percentage is still larger at present, though

exact general statistics are not available. Not more than 5% of wounds at present are typic bullet wounds. 64% mortality in penetrating abdominal wounds is the best rate thus far secured.

Good Roads. The N. Y. State appropriation for this year is cut from \$5,400,000 to \$3,787,383, to cover repairs, maintenance and construction. This provides for not much more than a hundred miles of hard surface roads, and let us hope that no more money will be wasted on grease and flint highways. One hundred miles of new work, plus whatever can be paid from licenses will mean very little if fairly distributed, much if planned so as to supply missing links.

Army Medical Service. Feb. 23, the medical corps of the regular army numbered 768, the reserve 13,687, the national guard 1,207, the national army 32, total 15,694. 1,050 have been discharged from the reserve corps, 411 for physical disability, 154 for inaptitude for service, 306 to serve the government in other ways, 59 on account of domestic difficulties, probably mainly of financial nature or because of special need of personal attention to business matters, care of dependents, etc., 88 by resignation without specification of reason, 32 on the ground that they were needed by communities, hospitals, colleges, etc.

The regular army corps (768) includes 1 major general (Surgeon General Gorgas), 61 colonels, 103 lt. colonels, 210 majors, 2 captains, 391 lieutenants.

The reserve corps (17,052) includes 1,011 majors, (the highest rank to which eligibility yet exists), 3,762 captains, 12,279 lieutenants. Of these the 13,687 called to service, include 844 majors, 3,227 captains, 9,616 lieutenants.

The national army corps (32) includes 4 brigadier generals, 10 colonels, 16 lt. colonels and 2 majors. It is generally understood that, so far as the distribution of the various branches of the service is concerned, there is practically no limitation to troops of corresponding designation, except that the national guard surgeons remain, for the most part, with the organizations representing those with which they were originally connected. Thus far, the national army medical corps has been utilized for the promotion of men of the regular or reserve corps, to grades for which there are no vacancies in the former and no provision in the latter, in cases in which service beyond the period of the war is not contemplated.

The Medical Reserve Corps. Without in any way desiring

to detract from the glowing accounts of some writers, volunteers should realize that we are at war and that, even in this country, this means a sacrifice of the comparative leisure and luxury properly enjoyed in the regular army in peace, with small numbers, adequate posts and a perfectly working routine without need of haste, by men gradually trained to the maximum of efficiency. It is not simply a matter of extra work and temporary discomfort due to an accidental cause. Much of the extra work is in preparation for actual emergencies that may be expected in Europe and much of the lack of minor conveniences and comforts, while not deliberately planned by the authorities to hamper new men in their work, is viewed philosophically, as a means of testing physical and mental strength, developing resourcefulness and that combination of initiative and dependence on authority that is necessary in the training of any soldier. For example, there is often compulsory attendance on clinics and lectures, and presentation of the same in rotation, occupying two or three hours a day, in addition to obviously necessary duties and without regard to personal preference and interest. Sometimes this really means a considerable strain. Detail as officer of the day involves the fatigue of regular and manifold special duties for long hours, indeed, with only so much sleep as a fortunate absence of emergency night calls allows. What you have read in the Regulations concerning the number of rooms or cash allowance when not provided, allowance for light, fuel, etc., privilege of buying from the quartermaster, assistance in keeping a "mount," orderlies, "strikers" (not of course so definitely described in any official document), transportation of baggage, leave of absence on full and half pay, etc., etc., is very largely a dead letter in time of war. You can count on your salary, enough room in a tent or some sort of barracks for your cot and your clothes, a moderate minimum of heat, light, etc., rather crude conveniences in the way of plumbing or what preceded plumbing in the last century, office equipment, etc. The only perquisites that you may expect are your first travel allowance which just about doubles your actual traveling expenses and very few repetitions of opportunities for travel without troops. If you make good, and the government really needs to train you along special lines, you may enjoy a splendid post-graduate course at government expense but it is by no means a sinecure. You have got to learn to do efficient medical work in spite of noise and confusion, perhaps in the midst of construction work, and in spite of untrained and shifting, often numerically inadequate assistance. You will have to watch your chance to get a typewriter (machine, not persons)

and will have to be your own interne and clerk and perhaps to write on a packing box and drive a nail to hold your hat. On the other hand, you will meet with a few hardships that you cannot readily excuse in view of the rapid need of establishing ways and means to a large amount of work and none that you cannot regard as either liable to be duplicated in the actual field of hostilities or, at least, as in some way preparing you for service at the front. On the other hand, so far as our experience goes, you will find no reasonable request refused for facilitating your work or securing your own proper enjoyment and maintaining your physical and mental well being—with due allowance for established methods of doing business and factors over which no one has control. You will find no hardship or fatigue not exceeded by enlisted men or even line officers, no executive difficulties and demands for adaptation in the face of all sorts of obstacles which your superiors in the medical corps are not meeting cheerfully.

Improvement in Juvenile Delinquency. As against the increase in prevalence of crime and misdemeanors by children in many of the beligerent countries, it is interesting to note that the children's court of N. Y. City showed a falling off from 7,927 cases in 1915 to 5,970 in 1916. Low immigration, higher wages of parents, quarantine on account of the meningitis epidemic, are given as the chief causes.

Sexual Prevalence of Suicide. Suicide is rare in childhood, though by no means unknown. In the adolescent period, 15-19, the rate is about 11: 100,000 persons living, for both sexes. In females, the rate then remains nearly stationary but for males, it gradually increases to the maximum of slightly over 80: 100,000 for the age group 65-74.

The "Venereal Menace of the Army." There seems to be no fallacy in these statistics: From Sept. to the last week of Dec., 1917, the incidence of venereal disease kept rather close to 80: 1000 per year, though one weekly rate was 51 and one 165. This may, in a sense be considered the normal average for soldiers. The National Guard showed an incidence varying at first from about 140 to 150, falling to about 45. The National Army, from an incidence of 387 for the second week—the first week's incidence being put at 193 but the marked increase being obviously due to lack of time to discover cases—to about 67 for the last two weeks. These statistics show that it is not army life but civilian that is a menace from the venereal standpoint.

SOCIETY MEETINGS

Brief reports and announcements of meetings of societies of Western New York, and those of general scope, are requested from Secretaries. Copy should be on hand the fifteenth of the month. Full transactions will be published at cost of composition.

Rochester Academy of Medicine; meeting held March 13. Dr. William M. Brown read a paper on "The Role of the Liver, in the Toxemia of Pregnancy."

BOOK REVIEWS

Books mentioned may be inspected at and ordered through this office. So far as possible, books received in any month will be reviewed in the issue of the second month following. Pamphlets, quarterly and similar periodicals, reports, transactions, etc., will, as a rule, merely be mentioned.

Transactions of the 23rd Annual Meeting of the Am. Laryngological, Rhinological and Otological Society, held in Atlantic City, N. J., May 31-June 1, 1917.

Transactions of the American Surgical Association; Vol. XXXV—1917. Dr. John F. Binnie, recorder of the association, edited the volume.

Military Ophthalmic Surgery. By Allen Greenwood, M. D., Major, M. R. C., U. S. A., Recently Honorary Lieutenant Colonel, Harvard Surgical Unit, with the Royal Army Medical Corps, British Expeditionary Force. Including a Chapter on Trachoma and Other Contagious Conjunctival Diseases, by G. E. deSchweinitz, M. D., Major, M. R. C., U. S. A., and a Chapter on Ocular Malingerer, by Walter R. Parker, M. D., Major, M. R. C., U. S. A. Medical War Manual No. 3. Authorized by the Secretary of War and under the Supervision of the Surgeon General and the Council of National Defense. Illustrated. Philadelphia and New York: Lea & Febiger, 1917. Pp. 115. (Price, \$1.50).

This handy volume is intended especially for use in the dressing stations and hospitals of the war zone and presents surgical methods that have stood the test in the British Army hospitals. About ten per cent. of the soldiers in Base Hospitals require some attention to the eyes and surrounding structures. Of the remaining cases, a considerable number will require fundus or visual field examinations at the request of the internist and brain surgeon, and not a few will be

found suffering from intra-ocular foreign bodies. As a prophylactic, the author recommends the steel eye shield devised by Dr. W. H. Wilmer for the Ordnance Department. Dr. Greenwood covers concisely the injuries most likely to occur in military practice and gives indications for enucleation and evisceration. The additions by Doctors deSchweinitz and Parker fulfill their purpose admirably. The illustrations, three roentgenograms, five colored plates and 16 cuts, are admirably chosen and well made. It is an excellent manual.

Military Orthopedic Surgery. Prepared by the Orthopedic Council. Medical War Manual No. 4. Authorized by the Secretary of War and Under the Supervision of the Surgeon General and the Council of National Defense. Illustrated. Philadelphia and New York: Lea & Febiger, 1918. Pp. 240, with supplements of 33 pages. (Price, \$1.50).

The Orthopaedic Council, consisting of Majors E. G. Brackett, J. E. Goldthwait, David Silver, F. H. Albee, and Doctors G. G. Davis, A. H. Freiberg, R. W. Lovett and J. L. Porter, in making a manual for military use, do not hesitate to avail themselves of the contributions of our Allies to this most important subject. They have quoted largely from Colonel Sir Robert Jones and Col. Edward L. Munson, U. S. A., and have added a Supplement, profusely illustrated, made up mostly from the "splint book" prepared by the Board of Medical Officers in France. The first 56 pages give excellent directions for the care and treatment of the soldier's foot. The following chapters deal with the joints, the spine, treatment for disabilities following nerve injuries, united and malunited fractures, bone grafting, and methods of fixation. Over 100 illustrations add to the utility of the text.

Food for the Sick. A manual for Physicians and Patient. By Solomon Strouse, M. D., Associate Attending Physician, The Michael Reese Hospital; Professor of Medicine at the Post-Graduate School, Chicago, and Maude A. Perry, Dietitian at the Michael Reese Hospital, Chicago. 12mo of 270 pages. Philadelphia and London: W. B. Saunders Company, 1917. Cloth, \$1.50 net.

In prescribing diets for his patients there are many things that the doctor does not explain and many ideas that could be amplified with profit to both parties. These things the authors have expressed briefly in their book, giving us not merely 283 diets and 124 special recipes with indications for

their use, but prefacing the study of each disease with a discussion of its peculiarities from the view point of the dietitian, and showing the why and wherefore of the dietetic restrictions imposed on the patient. The large number of interchangeable menus under one heading, such as diabetes mellitus, affords the greatest possible variety consistent with the demands of treatment. This makes the book especially useful in suggesting "something different" to the mind of the perplexed nurse and physician.

Surgery and Diseases of Mouth and Jaws. By Vilray Papin Blair, Major M. O. R. C., A. M., M. D., Clinical Professor of Surgery, Professor of Oral Surgery, and late Associate Professor of Anatomy, Washington University, St. Louis. 764 pp., 460 illustrations. Third edition, revised under direction of Surgeon-General U. S. Army. Required text for Army Schools and Plastic Surgery. St. Louis, C. V. Mosby Company, 1917. Cloth, \$6.00.

The third edition of this comprehensive treatise appears about five years after the first. There are a number of additions relating to injury and sepsis and their treatment as modified by the extensive experiences of the war. The subjects of peridental infections, local and general anesthesia have been re-written. There is a generous bibliography and an ample index. Altogether this volume is of the greatest service to the specialist who deals with any of the structures of the mouth and jaws.

Medical Ophthalmology. By Arnold Knapp, M. D., Professor of Ophthalmology, Columbia University, Executive Surgeon Herman Knapp Memorial Eye Hospital. Cloth, 8vo, 509 pages, 32 illustrations, price, \$4.00 net. Philadelphia, P. Blakiston's Son & Co., 1918.

This book is part of the International System of Ophthalmic Practice edited by Walter L. Pyle, A. M., M. D., of Philadelphia. It aims to give the essential relations of ophthalmology with other branches of medicine and surgery. The first eighty pages give an illustrated description of ophthalmological anatomy and physiology with special reference to the anatomy of those parts of the nervous system connected with sight. The rest of the volume takes up in order the various medical and surgical diseases and infections, poisons, and hereditary eye diseases. The range of the work is broad and it will be found very useful as a key to the influence of extra-ocular conditions of the eye itself.

State Board Examination Questions and Answers of the United States and Canada. A Practical Work Giving Authentic Questions and Authoritative Answers in Full That Will Prove Helpful in Passing State Board Examinations. Reprinted from the Medical Record. Fifth Edition. Altogether New Matter. Every Question Answered in Full. Price, \$2.50. New York: William Wood & Company, 1918.

This octavo of 970 pages presents enough questions from State examinations to acquaint the student with the general character of the papers that doctors are required to pass before obtaining the right to practice medicine. The answers appear to be carefully prepared, with no attempt to economize space. One who studies this book diligently before undertaking a written examination ought to have a fair idea of the nature and scope of the task awaiting him.

A Practical Text-Book of Infection, Immunity and Specific Therapy with special reference to immunologic technic. By John A. Kolmer, M. D., Dr. P. H., M. Sc., Assistant Professor of Experimental Pathology, University of Pennsylvania, with an introduction by Allen J. Smith, M. D., Professor of Pathology, University of Pennsylvania. Second Edition Thoroughly Revised. Octavo of 978 pages with 147 original illustrations, 46 in colors. Philadelphia and London: W. B. Saunders Company, 1917. Cloth, \$7.00 net, Half Morocco, \$8.50.

The appearance of the second edition of this text-book within two years from the first impress is sufficient evidence of its value. The author and the illustrator, Erwin F. Faber, have taken an extremely technical branch of science and treated it in a clear and readable manner. The work is valuable not alone for instruction but for reference and as a hand-book of technic. Part I takes up the general technic of immunology; Part II presents the principles of infection; Part III is a comprehensive discussion of the principles of immunity and the technic of special immunology; Part IV deals thoroughly with applied immunity; Part V is a laboratory guide in experimental infection and immunity, comprising 113 experiments, with suggestive questions for discussion. The revision includes new matter on focal infections, the Schick test, complement-fixation in tuberculosis and other infections, a quantitative Wassermann reaction, studies of the toxicity of salvarsan, new matter on anaphylaxis, chemotherapy, and many other topics, bringing the work strictly up to date.

OBITUARY

Readers are requested to report promptly the death of all physicians in Western New York, or former residents of this region, or graduates of any medical school in Western New York, and to notify the families of the deceased of our desire to publish adequate Obituary notices.

Dr. Edward Pollock Anshutz, Hering Medical College (Hon.) 1909, died in Philadelphia, Jan. 31, age 71. He was the editor of the Homeopathic Recorder. In December Boericke & Tafel published his book, "New, Old and Forgotten Remedies."

Dr. Howard B. Besemer, New York University, 1891 and Cleveland Hom. Med. College, 1892, died in Ithaca Feb. 8, age 48.

Dr. Heinrich Stern, St. Louis College of Physicians and Surgeons, 1899, died in New York City, Jan. 30, age 49. He was the editor of Archives of Diagnosis and Secretary of the American College of Physicians.

Dr. Robert Newland Blanchard, University of Buffalo, 1881, died in Jamestown, Jan. 18, age 62.

Dr. Thomas Davison Crothers, Albany 1865, died Jan. 12, from arterio-sclerosis, at his home in Hartford, Ct. He was born Sept. 21, 1842, at W. Charlton, N. Y., and received his pre-medical education at the Ft. Edward Seminary. After graduation, he practiced 4 years at W. Galway, N. Y. He then returned to Albany and was Asst. Prof. of Medicine in the Albany Medical College for several years. In 1875, he began institutional work as Asst. Physician in the Binghamton Inebriate Asylum. In 1878, he became Superintendent of the Walnut Hill Asylum of Hartford and, in 1880, assumed charge of the Walnut Lodge, which he continued till his death. He established the Am. Journal of Inebriety and continued in its editorial conduct till his death. He was a pronounced advocate of total abstinence and a scientific student of alcoholism and other addictions. He contributed extensively to the literature of this subject, several of his articles appearing in this journal. In 1896, at a meeting of the Keuka Medical Assn., we first became personally acquainted with Dr. Crothers and enjoyed a swim together. Perhaps this circumstance gives us the feeling of having known Dr. Crothers from boyhood, his vigor and youthful enjoyment of the sport

impressing us greatly at the time. We shall miss Dr. Crothers in every way, personally and professionally.

Dr. Henry F. Fullerton, Buffalo University 1875, died in Buffalo Feb. 13, age 84. He was principal of Grammar School No. 16, Buffalo, for nearly fifty years. He never practiced medicine.

Dr. John H. MacCallum, Pulte Medical College, 1862, died in Rochester, Feb., age 64.

Dr. Conrad Diehl died in Buffalo, February 20, age 75. He was graduated from the University of Buffalo in 1866. He left shortly afterwards for courses in the Universities of Göttingen and Berlin. He served as Coroner of Erie Co. in 1868,



Mayor of Buffalo in 1897-1901, and was the chairman of the first Board of School Examiners in 1896. From 1870 to 1878 he served as Major in the Medical Corps of the 65th Regiment. During Dr. Diehl's whole life, he had lived in but two houses, situated a few blocks from each other.

At a special meeting of the Medical and Surgical Staff of the Buffalo General Hospital a committee was appointed by Dr. James E. King, President of the Staff, consisting of Dr.

Henry R. Hopkins, chairman; Dr. Norman L. Burnham and Dr. Allen A. Jones, to draft a suitable memorial upon the death of Dr. Conrad Diehl.

Our late lamented confrere, Dr. Conrad Diehl, possessed many of the finest and best characteristics of the good, the worthy, the capable, and the efficient physician. He began his medical career well equipped and fortified by study and experience gained here and abroad. He early engaged in more or less public and institutional medicine. His sterling makeup, his probity, his ready and spontaneous kindness, his professional abilities, quickly won him practice and standing in the community. His freedom from pretence and vanity won for him confidence and respect. His conscientious industry increased his practice, set him as dependable in the hearts of his large clientele, and made him much esteemed.

His popularity as a citizen was measured by his election as Mayor of the City of Buffalo, and he served honorably in that capacity in 1901, at the time of our beautiful Pan-American Exposition. In his public capacity he stood by and ministered to our late beloved President, William McKinley, whose sad and untimely death spread its gloom upon the city.

His enthusiastic, willing, and unstinted service to The Buffalo General Hospital are well known to many who survive him, and were appreciated by many who served with him and departed before him. The members of the Medical and Surgical Staff of the hospital, therefore, hereby testify to their deep sense of the splendid services rendered by their deceased and revered colleague; they keenly regret his loss; and they extend to his bereaved family their sincere and heartfelt sympathy.

MILITARY PERSONALS

Capt. A. L. Benedict has been transferred from Base Hospital at Camp Sheridan, Ala., to Officers Training Camp, Ft. Oglethorpe, Ga.

To Camp Travis, Fort Sam Houston, Texas, Lieut. Frank E. Fox, Fulton.

To Fort Riley, Lieut. Samuel T. Nicholson, Jr., Clifton Springs.

To Macon, Ga., Lieut. John A. Morrissey, Newark.

To New York City, Capts. Harry Weed, Buffalo; Charles W. Hoyt, Rochester; Lieuts. F. P. Schenkelberger, Collins; Elias C. Fischbein, Sonyea; Wm. L. Grogan, Rome.

To their homes and honorably discharged on account of physical disability, Capts. Francis W. McGuire, Buffalo; James E. Holden, Collins; James H. Irish, Syracuse.

To Camp Custer, Battle Creek, Lieut. James L. Horndorf, Rochester.

To Camp Dix, Wrightstown, N. J., Major Martin B. Tinker, Ithaca; Capt. Roland C. Meisenbach, Buffalo.

To Fort McHenry, Md., Lieut. Maxwell C. Montgomery, Rome.

To Fort Oglethorpe, Capt. Charles H. Erway; Lieuts. Earl W. Thema, Buffalo; Harry E. Wheelock, Jamestown.

To report to Surg.-General of the Army, Lieut. Earl H. Lormor, Buffalo.

To Rochester, Capt. Clayton K. Haskell, Rochester; Lieuts. Raymond J. Brown, Eric S. Green, Rochester.

To Army Medical School, Wash., Lieuts. Chas. G. Irish, Lancaster; Wm. M. Edmonds, Tonawanda.

To Washington, Lieut. Martin F. Nolan, Tonawanda.

To Allentown, Pa., Lieut. Elmer E. Owen, Batavia.

To Camp Devens, Ayer, Mass., Lieut. Adelbert C. Abbott, Syracuse.

To Camp Dix, Wrightstown, Lieut. John A. Metzen, Buffalo.

To Camp Wadsworth, Spartansburg, S. C., Lieuts. Jos. A. Nowicki, Buffalo; Herbert L. Kallet, Syracuse.

To New York City, Capts. Edward T. Wentworth, Rochester; Samuel Stewart, Syracuse; Lieuts. Arthur C. Smith, Elmira; Ira W. Livermore, Gowanda; Joseph L. Wozniak, Buffalo.

To Philadelphia, Pa., Lieut. Arwin H. MacFarland, Rome.

To Pittsburgh, Pa., Lieut. Bert G. Voorhees, Elmira.

To Rockefeller Institute, Capt. Chas. I. Hincer, Rochester.

PERSONAL

Announcement of removal, travel, and other matters of interest are requested. Please report errors in the listing of any physician in the State and other directories, that we may co-operate with the State Society in securing a correct list.

Dr. Laurence G. Hanley spent two weeks in March in New York and Atlantic City.

Dr. Herman Johnson of Gowanda has returned from Fort Arthur, Baltimore, on a month's leave. He has been transferred from service in France to service in this country.

Dr. Frederick E. Strozzi of Buffalo has been commissioned First Lieutenant in the Medical Reserve Corps.

Dr. Benjamin Rogers has been appointed oculist for the Buffalo Division of the Wabash Railroad.

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ORIGINAL ARTICLES

The right is reserved to decline papers not dealing with practical medical and surgical subjects, and such as might offend or fail to interest readers. Contributors are solely responsible for opinions, methods of expression and revision of proof.

The Period of Contagiousness of Certain Diseases, and the Best Means of Preventing Transmission.

DR. E. SWANN, Merion, Ala., Capt. M. R. C.

(Published by permission.)

Today the medical profession is spending more money, time, and effort toward prevention of disease, than at any time in the history of the world, and we realize and appreciate the individual who really does something to prevent disease, and the spread of it, far more than the ones who are treating the sufferers who have already contracted it,—the man that can keep the soldier well, and ready to fight, is the one who is worth while.

Pneumonia, while not listed in the textbooks as one of the contagious diseases, is undoubtedly infectious and communicated from one person to another. It is usually spread by immediate contact, either with a person suffering from the disease, or with a convalescent, or healthy carrier. The importance of these modes of transmission varies with the different diseases. With most diseases, however, the healthy carrier may be a greater menace to the community, though the infected individual, because of the failure to detect the carrier condition, as in typhoid and meningitis, is well recognized. It has been proven that a considerable percentage of persons intimately associated with pneumonia patients harbor pneumococci of the same type as those suffering with the disease. It is claimed these carriers harbor the organisms in their mouths for a variable period, averaging 3 to 4 weeks. Another means of conveyance that has been known and recognized for some time is through dust—though very little

importance is attached to it, except in rooms where one has the disease. We have considerable evidence, contrary to the opinion previously held, that a good per cent of pneumonia arise by infection from without. Therefore we should have some practical means of prevention. Even if we did not know what the exact cause was, the adoption of such precautions as are taken in the efforts to control the spread of some of our other infectious and contagious diseases would be justifiable. And as we are certain of the essential cause and in a large percentage of our severe cases of pneumonia, even of the mode of transmission, it is very important that we use every means to prevent its spread. To do this in our army hospitals each case should be regarded as a focus for the spread of the infection, and the care of the patient should be such as that of diseases universally recognized as communicable. The patient should be isolated as nearly as is practical, and his communication with others should be reduced to a minimum,—and as we know the pneumococcus finds its way out from the patient, in the secretions from the mouth and lungs, the sputum should all be collected in special containers and burned. Some sputum cups are not wide enough at the top for a sick person to spit in. If they were flared more at the top, there would not be so much danger of the sputum missing the cups, and getting on the clothing, the bedding, or dropping on the floor. Every thing that comes in contact with the mouth should be thoroughly sterilized before using again. The rooms or buildings occupied should be thoroughly cleaned. I don't believe it a good or safe plan, to place many patients suffering with any communicable disease in the same room or too near each other. For several weeks between 30 and 40 cases of measles were crowded in one hospital ward. Several were either accompanied or followed by pneumonia, bronchitis, and catarrhal fever, (pardon the term, but I have no other name at present for the condition), mastoiditis, otitis media and tonsillitis. For a time there was a high mortality in this ward, we were all discouraged at the way things were going. The uncomplicated measles cases were moved into other wards, leaving the pneumonia and ear cases. Afterward there was one death in this ward and it was due to acute tuberculosis. There was an immediate marked improvement of all patients, the old cases began to get better, and there was no further development of pneumonia.

In a ward devoted to mumps, where we did not have so many bunched together, and where the air allowance was abundant, there was only one complication of any consequence—Orchitis, which is part of the original disease. In

contrast, a ward crowded with cases of mumps, developed all kinds of catarrhal throat and bronchial conditions. An additional precaution in preventing the spread of disease is the use of bed sheets hung on wires stretched across the room, between each two beds.

The daily cleaning of wards should be done in some way to prevent dust from being disseminated. As I have already stated the pathogenic pneumococci are carried in the mouth and lungs for 3 or 4 weeks, and if space is available it would be a good plan to keep convalescent pneumonias in a hospital until they are strong, and free from pneumococci. I understand this is a difficult problem for the army, and at present not practical, yet I believe it would reduce the number of cases materially. Each convalescent should use the same precaution in daily cleansing the mouth, throat and nose with the same solutions as are used in isolation wards. In concluding this part of the subject I would say, thoroughly isolate, do not crowd wards, separate beds by curtains coming close to the floor—have all attendants take the same precaution as in frankly contagious diseases—determine type if possible, search for carriers, as in other diseases of like nature, and when found isolate them, and I believe we can reduce incidence and mortality of pneumonia considerably..

Measles occurs in wide spread epidemics, being as a rule most common in the spring, though at present there is a world-wide epidemic which began last Sept., and still continues, though abating quite rapidly. It is contagious from the beginning of the catarrhal symptoms, being most contagious during this period, and while the rash is coming out. As the eruption begins to fade, and the catarrhal symptoms clear up, the risk of infection rapidly diminishes. The duration of the infective period is about 3 weeks, or as long as the patient is desquamating or the cough remains. Some few individuals are immune, but I think that number extremely small. The period of incubation is from 7 to 14 days.

The control of measles among our troops, should be studied more closely and more care taken to prevent its spread, for it can be, and is a preventable disease. It should not occur in epidemic form in our army, yet it is killing more soldiers in the aggregate than any other disease. The complications are so numerous and serious, that it is interfering to a great extent with our military efficiency. The cause for this can be removed. One of the most practical measures in controlling the disease, is first to consider it as one of the respiratory diseases, and establish isolation as early as the first symptoms arise, considering of course, any rise in respiratory

symptoms as a forerunner of the disease. This precaution must be started in the companies where it first makes its appearance, and cases should be isolated just the same as for meningitis. Look closely after all who are not well; of course this duty falls on the regimental surgeon. One advantage in this method of isolation is that it does not require but 4 or 5 days to find out whether the soldier has measles or not. When a case does break out, all catarrhal cases should be isolated at once. It would be well for the surgeon of each unit to look carefully over each soldier for any respiratory symptoms, Koplik spots, etc. If we wait until the rash appears the infection has had a chance to spread. When a case has once broken out, in about 12 days search for others. It is well to isolate all contacts for 12 or 14 days, ventilate rooms and tents each day, letting in all sunshine possible, and by all means do not allow the soldier to remain in an overheated room. I think it a real neglect of duty on our part that we allow our hospitals in the different cantonments all over the country to be filled from month to month with a preventable disease—especially one that interferes so materially with the training of the soldier.

Mumps is another one of our highly contagious diseases of which no specific organism has ever been found. It is usually communicated by the breath, can be carried by a third person or by fomites; it is most likely to be communicated during the beginning of the attack, but possibly while the febrile symptoms remain. The period of incubation is from 10 to 20 days. The duration of an attack is about a week. Complications outside of orchitis are rare. The patient, and all parties exposed should be quarantined for 3 weeks. At present we are keeping our patients in hospital 3 weeks.

Cerebro spinal meningitis in epidemic form has not proved very contagious among our soldiers.

Flexner states the meningococcus is unknown outside the human host. The organism is kept alive by the human carrier; it enters the body by the mouth, or nose, after which it reaches the central nervous system by way of the lymphatics or blood stream, the former being the more frequent route. Those with a cough are more dangerous than those without. There are four types, type one being the most virulent. The organism multiplies on the mucous membrane. The meninges may become affected soon after the organism reaches the nose or it may not occur for days, weeks, or months thereafter. The danger from a carrier is greater than that from an established and isolated case. The germ may be carried on the bodies of flies. The average duration of the infectivity

of a carrier is about four or five weeks. Flexner states that the best method at present of clearing up carriers is to sniff through the nose twice a day a 1% sol. of chloramin with gargling of the throat with the same sol. or a spray of 2% sol. of chloramin T. in oil. The vaccines are of no use in clearing up the throats of carriers, though of considerable value in treatment.

W. H. Morley, Detroit:—The Preparation and Standardization of Ovarian and Placental Extracts. Surg. Gyn. & Obst. Vol. XXX, 1917. Morley gives due emphasis in his article to the need for more uniform methods in the preparation of ovarian and placental extracts. Tangible laboratory and clinical data are still moreover lacking in extent. A review of the more important articles on the above subject reveals the circumstance that it is only within the last ten years that an attempt has been made to isolate the active principle of the ovary and placenta, especially the former. Iscovesco (1908) obtained "lipoids" from the red blood corpuscles, hypophysis, kidney, adrenals, ovaries, the testicles and the corpora lutea, and discovered they exerted a certain action on the female genitalia. The "homo-stimulating" lipoids, he found, had an action on the same organ from which they were derived, the "hetero-stimulating" lipoids exercising an action on different organs—this division he discovered later being purely arbitrary. Hermann (1915) believes he has succeeded in separating the "active substance" of the corpus luteum and of the placenta as a specific chemical substance, having identical physiological properties. Hermann possibly obtained his so-called active substance in a purer state. After engaging in special research work along this line during the last two years, Morley expresses the opinion that up to the present time no ideal method of preparation has been formulated, and until that is accomplished, standardization of the product will not be attempted. Considering the newness of the subject the article concludes with quite an extensive bibliography.

Cardiac Sequellae of Asphyxiating Gas. Ch. Fiessinger, Le Prog. Med., Oct. 20, 1917, calls attention to the action of the newer gases employed by the Germans, probably containing cyanogen compounds. Bradycardia and syncope are the principal symptoms. In sudden intoxication he recommends bleeding and ethero-camphorated oil. Later, the gastric hyperaesthesia is treated with bismuth preparations and theobromide and small doses of caffeine (0.10-0.20) are used to support the heart.

Differential Diagnosis—Chicken Pox—Smallpox.

By EDWARD CLARK, M. D., Buffalo,

Sanitary Supervisor New York State Dept. Health.

The eruption in smallpox is a deep-seated eruption involving the cutis vera, while the eruption in chicken pox involves the epidermis only or at best the superficial layers of the cutis vera.

The eruption in smallpox presents certain well defined and typical stages, and the lesions in a certain area are always of one distinct type, that is, they are always either papules, vesicles or pustules. On the other hand, in chicken pox the lesions in a certain small area, even when in close proximity to each other, are of various types. In an area no larger than half a dollar, in chicken pox, we may find macules, papules, vesicles, pustulated and dessicated vesicles in close proximity. The eruption in chicken pox comes in successive and reappearing crops in the same area. This never occurs in smallpox. When the papules begin to show themselves in small pox all of the papules that will occur in a certain area show themselves in a very short time and do not successively reappear. The areola surrounding the vesicle or pustule of smallpox is indurated, elevated, hard to the touch and of a carmine red color. In chicken pox the areola surrounding the vesicle is not indurated except where the skin is drawn tight over a bony surface, as the forehead, which produces what some authors call a shot-like feel; this fact alone leads to many errors in diagnosis for the authors have inculcated the idea that this shot-like feel is found only in smallpox. It occurs in measles, acne, drug rashes, and even in rashes produced by gastro-intestinal disturbances in those locations where the skin is close to the bony tissues. The color of the areola in chicken pox is more of an orange red than a carmine, and when the vesicle breaks down black crusts occur instead of the yellow or gray scab which we see in smallpox. The crusts in smallpox are seldom very dark except in the hemorrhagic type or in the cases where scratching or irritation has produced bleeding. The shape of the vesicle or pustule in smallpox is generally almost perfectly cylindrical, and before umbilication takes place, it stands out prominently like a lentil or split pea on the skin. In chicken pox the vesicle may be irregular in shape or distinctly ovoid, which type is frequently seen on the trunk of the body, especially on the abdomen and loins.

As to location, in smallpox the eruption appears first on

the face, particularly the forehead and nose, then on the hands, then on the feet, lastly on the trunk. The disease shows a decided predilection for the face, hands and feet. Except in very severe cases, there is not much eruption on the trunk, and generally it is almost entirely absent in the axillary spaces. It occurs on the soles of the feet, the palms of the hands, and on both the hard and soft palate. On the soles of the feet and the palms of the hands before the papule shows on the surface it may be felt through the thick skin, giving to the sense of touch the feeling of a small foreign body imbedded therein. Chicken pox, especially in cases where the eruption is profuse, shows a predilection for the trunk of the body rather than for the face, hands and feet, and the eruption here may occur simultaneously with or before the eruption shows itself on the face or hands. This is especially true in cases of chicken pox in the adult. If you close your eyes, and with your finger or thumb, properly protected, break one of the vesicles in smallpox and run your finger back and forth over it, you will still feel the hard, indurated base of the lesion. If you do this in chicken pox, you will detect a decided absence of this hard, indurated base.

It would seem that many authors and physicians believe that chicken pox seldom, if ever, occurs in adults. This is absolutely false teaching, as verified by my experience. I have seen in the past five years over three hundred cases of chicken pox in adults. When it occurs in adults, the eruption is generally much more profuse than it is with children, and at times is found on the palms of the hands, on the soles of the feet and on the hard and soft palate, also on the scalp.

As a rule, when there is smallpox, chicken pox is generally very prevalent, and I have seen chicken pox and smallpox in different members of the same family at the same time, each presenting its own peculiar diagnostic characteristics.

If any one therapeutic measure has been proven by long years of experience of incalculable value to the human race, it is vaccination for the prevention of smallpox. The statistics of the world relating to smallpox and vaccination, indisputably prove that more than 90 per cent of all cases of smallpox occur in persons who have never been successfully vaccinated, and that less than 10 per cent of all cases have occurred in persons who have been successfully vaccinated at any time during their lives. In view of these well-established facts, it is an absolute waste of time and effort to enter into any discussion at this late day as to the value of proper vaccination as a prophylactic measure against smallpox. I am radically opposed to all spasmodic efforts in vaccination; by

this I mean that it is unwise to let the people in any community go unvaccinated until an epidemic of smallpox makes its appearance. If this rule were followed, there would be some communities where in the course of a generation no vaccination whatever would be done, with the result that the entire community would be a distinct menace to the surrounding country and state, if smallpox should make its appearance. My firm belief is that all children, unless physically incapacitated, should be vaccinated in the first two years of their life, or at least before they are allowed to enter a public or private school.

In conclusion I want to emphasize the fact that much of the well founded opposition to vaccination has been brought about and fostered by carelessness and indifference on the part of the medical profession toward this important and beneficent protective, by the careless and slipshod method in which the operation is performed by many physicians who can not plead ignorance as a cause of either indifference or neglect. Vaccination is a surgical procedure, and should be performed and cared for just as aseptically as any other surgical operation.

Fracture of Atlas Without Medullary Symptoms. J. and A. Boeckel, Lyon Med., Oct., have collected 31 cases of cervical fractures, including 14 of the atlas and axis, observed and treated since the development of radiography, which have not resulted in a single death. On the other hand, they have collected 36 cases of cervical fracture, including three before the advent of radiography, of which total, 17 involved the atlas and axis, with a total mortality of 22 (64%). The present case was that of a soldier wounded in the neck at Mort Homme. A mastoid fracture was discovered and trephined, recovery occurring without any special symptom except diminution of hearing. A small metallic splinter was extracted from the wound. During his stay in the hospital, he occasionally had formication in the fingers, some brief cramps and discoloration of the fingers. The reflexes were normal. X-ray examination showed a large shell fragment a finger's breadth from the right mastoid and a fracture and outward displacement of the posterior portion of the atlas. After extraction, it was found that the dressing of the wound sufficed to hold the bone in place. Rotation and flexion of the head were somewhat painful but not markedly restricted. The authors have devoted a chapter of a book to cervical fractures by missiles in which are reported 15 cases, 10 radiographed, with a mortality of 40%, from special complications, mostly haemorrhage.

America's Great Tonic.

JOHN PRICE JONES,

Assistant Director, in Charge, Press Bureau.

Liberty Loan Committee, Second Federal Reserve District,
120 Broadway, New York.

(Written exclusively for "Buffalo Medical Journal.")

The Liberty Loans might be likened to great tonics, refreshing and building up a combative body of huge proportions. It is this giant, panoplied in all the safeguards and offensive instruments that modern imagination has conceived, who is to receive its third tonic, in the shape of another loan, on April 6. •

The necessity for a further upbuilding of this giant is apparent if the ideals that America was nurtured in and by which she is claiming the right of existence are to endure. Abraham Lincoln in immortal words said long ago that this country was "dedicated to the proposition that all men are created equal." That ideal is one that America has kept constantly before her eyes, and it is because the Hun has sought to make of himself a conscienceless Obermensch or superman, destroying the values of all creative communities about him, subduing his own dependencies to the class of speechless menials and generally abrogating to himself in a selfish manner the tools of power that the Republic is in this war. She is in it to the finish because of her unalterable opposition to all that is destructive in civilization. It is the duty, therefore, of every person of sincere and honorable ideals in this country to forward the war, to bring it to a speedy and successful conclusion.

That great object may be obtained if the gigantic military machine fighting for truth and right and America is properly strengthened and kept at formidable proportions. It is time for the third tonic; martial days disastrous in their consequences to the enemy loom ahead and our chivalric giant must be in exceptional condition to meet them. The Third Liberty Loan is a tonic which is bound to prove a decisive factor in hardening the unconquerable qualities of America's loyal giant. It is the duty of every man to aid in the preparation of this great tonic.

Prosthetic Use of Hard Rubber. Delbet and Girode, recommend hard rubber cuffs in extensive loss of bone as in the humerus and similar appliances to afford external support.

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Second Lieutenants for the Medical Dept. of the Army.

As in regard to the propaganda for universal military service, we feel that great care should be taken not to embarrass any branch of the federal government by urging any action, however much it may appeal to us, that might distract attention from the immediate emergency. The present is not the time to look too far ahead. The fact that a majority of our editorial staff is in the service of this country and our allies increases our reluctance even to appear to advise their superiors. However, the following may be set forth for what it is worth.

In June, approximately 2,000 young physicians, lacking interne training will be available for the military medical service and about as many more undergraduates will be available in an emergency, having about the same medical education as the graduates of a comparatively few years ago, indeed, lacking mainly the clinical and clinical laboratory refinements added to the medical course with the institution of the fourth year, though not necessarily actually placed in the curriculum of the fourth year. One of the troubles of the military service, whether viewed from the standpoint of the service or of the individual, is the difficulty of getting men of mature years to do the clerical and detail work which the army surgeon is expected to do but which the overwhelming majority of the present staff has, for many years in civil practice, especially at hospitals, been accustomed to leaving to internes and assistants. On the other hand, one of

the difficulties which have been encountered in securing free volunteering of young medical men is the lack of the ideal place for them. True, the medical student or graduate lacking in all the requirements for commission as first lieutenant, whether volunteering or conscripted, may usually enter the medical department, and may usually find valuable and congenial training along the lines of his special interests, may indeed secure rather rapid promotion to non-commissioned grades and may ultimately, complete his medical course and matters may eventuate so that he can, if he desires, secure a commission as a surgeon.

But there is no denying that there is a wide difference between the man who has just succeeded in conforming to the requirements for a first lieutenant's commission and the one who lacks only a little of the undergraduate training, internship or standing of college of graduation and who is serving in the medical department of the army as a private or non-commissioned officer. The difference is embarrassing to himself, sometimes to his superiors, it is not unreasonable to suppose that it detracts considerably from the number of men volunteering.

The present medical service needs men of this kind, not so much to spare the dignity of older men suddenly required to spend a considerable part of their time in rather rudimentary medical work, as to conserve for a higher grade of work, the energy lost to the government. On the other hand, in strictly clinical, laboratory work and even didactic instruction—for wherever medical men of the army are gathered in sufficient numbers, they are receiving actual instruction and not merely opportunities to observe cases—the army is now prepared to furnish to every young man in the medicine the equivalent of the fourth year of a college course, barring perhaps some technical points that could easily be supplied in a comparatively short special course to fit him thoroughly for graduation with the degree of M. D. It is also prepared to furnish an internship far in advance of the average one available in private life.

Perhaps it is worth considering whether young men of the type mentioned, might not be commissioned second lieutenants and after a year's service as military internes and assistants, be turned back to their colleges for an intensive course to supply whatever deficiencies there might remain preliminary to the receipt of the degree of M. D., and after receiving the degree, be subject to promotion to the grade of first lieutenant on examination.

Military Notes.

8% of the wounds of the Civil War involved the thorax, the mortality being 27.8%. In the Spanish-American War, the mortality of wounds in the thorax was about 9.5%; and slightly less in the Boer War. This was due not only to the introduction of principles of antisepsis but to the smaller calibre and higher velocity of bullets. In the present war, the mortality has risen to 14.5% partly because the fighting has been on highly polluted soil, partly because the stationary nature of the fighting has enabled many very serious cases to be included among the wounded treated which, previously, would have died before collection was possible. The mortality of chest wounds differs widely if we distinguish between penetrating and non-penetrating. Over 50% of the flesh wounds of the Civil War were located in the chest, and the mortality was only 1%, whereas the mortality of penetrating wounds of the chest was 62.5% and, in the Crimean War, it was 91.5%.

Many chest wounds recover under expectant treatment. In a case in which it seemed certain that the right auricle was pierced, the soldier was back on the firing line within a few weeks. Although a reasonable attempt is made to extract projectiles, this is not always possible, and a bullet in the parenchyma of the lung does not necessarily prevent healing and restoration of health.

13 cases of bullets lodged in the heart have been treated in French hospitals during the present war, with 10 recoveries. The vast majority of such wounds are, as heretofore, almost immediately fatal, but French surgeons feel that as surgery is pushed to the front, in accordance with the present policy, the results in cases that are not immediately fatal from massive haemorrhage, will be very good, not even of so high a mortality as penetrating abdominal wounds.

It will be remembered that when the modern, high velocity, small bullet was first introduced, it was prophecied that the majority of wounds would be uninfected, that the foreign body would escape by its own momentum, and that the lesion would be comparatively slight. Experience showed, however, that while this was measurably true for distances beyond the first thousand yards or thereabouts and up to the distance when diminishing velocity allowed a wobbling of the missile, the tremendous velocity of the bullet at short range produced an extensive laceration of tissues, which has been termed an explosive action. For example, a bullet at short range will make a small hole through an empty can, but will "explode" a can filled with water. An army surgeon however, has

pointed out that the term "explosive" is not strictly correct. The enormous momentum of a bullet at short range, meeting even a slight obstruction, is inevitably dispersed laterally, and in fact in all directions, in accordance with well known physical principles.

The objection to using iodine before suppuration has occurred, is that it coagulates albumin and lowers the vitality of the wound. Turpentine has been suggested as a substitute but, on the whole, properly prepared Dakin's solution has given the best results.

Contrary to the regulations of the U. S. army, any French officer is authorized to buy any special article of food that his command requires. It should be borne in mind, however, that the customary demands of the French are lower than would be the case among American troops. Meat, for example, is ordinarily issued only twice a week. Wine is also habitually used and, as it is very cheap, it is estimated that 30 centimes buys as many calories in wine as 2 francs in meat.

Tin containers have been discarded from the first aid packets in France on account of the increased severity of a wound if the packet is struck. Waxed paper has been substituted.

Among the special malingering devices detected are: use of picric acid to simulate jaundice; smoking cigarettes impregnated with sodium chlorid to acquire pallor; rubbing with sand to produce dermatitis.

While the wound of entry is usually smaller than that of exit, exceptions occur so that this rule cannot be relied upon to detect self-mutilation.

Shrapnel bullets, having a comparatively small initial velocity, usually do not inflict much traumatic damage, but are dangerous mainly from introducing infected soil and clothing. They may flatten against a bone without fracturing it, and may be stopped by the skin opposite the point of entry.

Bayonet wounds are rarely encountered in military practice, being usually fatal before the wounded can be brought even to the first aid station. For this reason, the British and Canadian soldiers prefer to use the bayonet whenever practicable. It is claimed that one man killed 28 Germans in rapid succession, as they were driven out of a cave. The principle of bayonet practice is the same as boxing, both offensively and defensively. Soft parts are chosen to prevent sticking of the bayonet in the wound and one British soldier, expert with the bayonet, being virtually disarmed because his bayonet was firmly lodged between the ribs of his adversary, extricated it by discharging his gun.

Statistics of abdominal wounds are somewhat fallacious.

Some series seem to show that even cases subjected to prompt operation do not give better results than those in which expectant treatment is used. Other series contradict this impression and the general opinion is being developed that the treatment should, so far as possible, be discriminating. As abdominal wounds are especially liable to prevent locomotion most such cases are brought in at night, when wounded can be sought without almost inevitable death of stretcher parties. In such cases, operation is often impossible on account of cold alone. It is sometimes difficult to discriminate between wounds of the abdominal wall and those which penetrate, usually impossible to determine whether a penetrating wound has injured one or more viscera or has passed between them. Even without visceral lesion, a penetrating wound may cause extensive haemorrhage or septic peritonitis. Those whose stomachs and intestines are relatively empty give better results than those wounded after they have eaten heartily, for obvious reasons. The aggregate mortality of abdominal wounds is nearly 70%—40% shock, 20% peritonitis, 10% haemorrhage. 64% mortality is the best report thus far made of any considerable series.

The soil of Belgium is loaded with anaerobic bacteria, including the tetanus and gas bacillus, from centuries of intensive cultivation. A combined serum is used as a routine in all wounds. Owing to the economic value of manure and the custom of building dwellings, barns, stables and outhouses in a hollow square, practically all available buildings in the country are infested with flies and the water is highly contaminated, though not necessarily with bacteria of specific human diseases. (Note: The French word *ferme*, from which our word farm is derived, means the square inclosure of buildings, not the land, the word being ultimately the same as *firm*, in allusion to the security of the inclosure.)

Any fairly blunt projectile of high velocity, practically always carries into the wound, all the layers of clothing, as smoothly cut as if by a paper punch. The clothing is almost always infected from soil and perspiration.

Wounds of the hands and buttocks practically always show gas bacillus infection, those of the face rather infrequently. If gas gangrene does not develop within 24 hours, the case is considered fairly safe on this score.

A series of 2203 wounds treated at a hospital in Belgium April-October, 1915, were classified as follows: rifle bullets 497, shrapnel 94, shell fragments, etc., 1074, accidents not directly due to combat 203, fractures 179, other wounds 108, undetermined or unspecified from imperfections of records 48. Over 75% of this series were returned to the firing line.

TOPICS OF PUBLIC INTEREST

The Alvarenga Prize of the College of Physicians of Philadelphia for 1917 has been awarded to Wilbur C. Davison of Baltimore for his essay on the Superiority of Inoculations with Mixed Triple Vaccine. Essays for the present year must be filed by May 1. The award of about \$250, will be made July 14.

Field Hospitals and Ambulance Companies will be given odd numbers if supplied with motors, even if the motive power is by horses or mules.

College Merger. Bennett and the Chicago Colleges are combined to form the Medical Dept. of Loyola University of Chicago.

Dependence of Death on Birth Rate. The paradox that a high birth rate causes a relatively high death rate may be better understood when it is remembered that a quarter of our population is included in about 150 cities of 25,000 and upward. For 1916, they reported about 670,000 live births and 68,500 deaths of infants under one year. Approximately, the 2¾% of the population has a death rate of over 100:1000 population. Thus, when we say that the whole country has a mortality of about 16:1000, it means that the population over one year of age has a mortality of about 13.6:1000. When we realize that for many years, our population has been increased by immigration, mainly by that of healthy, adult males, it is obvious that our total mortality is very much less than it would be, under equal conditions of health and mortality, if our increase in population were dependent solely on births. With the practical cessation of immigration from the middle of 1914 for the period of the war, perhaps for some time after, only a very decided improvement in sanitation and hygiene can prevent a decided rise in our death rate. The general principle involved has a significance in regard to the war that is little appreciated. The various European countries involved, do not depend to any great degree upon immigration for their growth, rather have they lost by emigration. Without being able to furnish exact statistics, it is generally held that the "normal" mortality for a country not markedly affected by immigration and emigration, is nearly 20:1000 though, of course, further improvement is possible. It may even be said that the principle mentioned has a direct military bearing. The U. S. has an

advantage in the relatively higher number of adults and, because immigration has generally shown a disproportionate number of males, of man power. Even granting that the excess of male adults is largely at ages beyond those of military service and that it includes alien enemies, there is still a relative excess of man power for industry which probably more than compensates for the weakness of alien enemies of hostile tendencies, and which allows more young men to enter military service without seriously crippling industries and calling women from domestic life, than is the case in Europe. Any excess that the U. S. has in man power, implies a corresponding draft from Europe so that whatever difference exists is double that between a country affected by immigration and one dependent on births. Our relative excess of man power has a further bearing on vital statistics of the future. For various reasons, the birth rate will not be so much diminished in this country. About half the population of any country, is below an age corresponding closely with that of maturity. This part of the population is, on the whole, more vulnerable, especially to the indirect influence of war and it becomes more and more vulnerable as we descend in age. The European countries not only have a relative excess of the vulnerable part of the population—say 52 or 53¾ as against 48 or 47% for the U. S.—but for all except France, i.e. for all which have hitherto shown a healthy growth of population, there is a disproportionate excess of the lower and lower age groups of increasing vulnerability. It has been said, for example, that in Poland, at least in those parts pretty directly subjected to military operations, the population under five years of age has been practically wiped out. The same principle is illustrated, though to a less degree, in Belgium. With these exceptions, it is undoubtedly operative to a greater degree in the central powers, than in their antagonists. Under conceivable estimates of the duration and local incidence of the war, it is apparent that, relatively speaking at least, the U. S. will have an enormous advantage over all the other belligerents, a most favorable omen for the future.

The Franking Privilege is accorded to all sailors, soldiers, doctors and nurses at the front. It is even proposed to extend it to all in the military service, even in this country.

Attrition of the War. The total British losses on the western front were 129,089 for Nov., 79,527 for Dec., 73,017 for Jan. The proportion of killed to wounded varies from 1: 3 and a fraction up to 1: 6, by weekly reports but the latter

ratio occurs when the missing are an important element, as in more active hostilities with change of position. About 25% of wounds incapacitate for further military service, at least for a considerable time. Thus, aside from prisoners, the definitive losses are just about double the direct fatalities and range from 20 to 40% of the total casualties, averaging about 33.3%. If the quarter year is taken as a fair standard, the definitive losses of the British are at the rate of about 375,000 a year. This is for about 135 miles of the total 460 miles of the western front, the Belgians occupying 16 miles and the French the remainder until recently, the proportionate definitive losses for the entire front being about 1,200,000. It is probable that the German losses are about equal. The recent French estimates of the German forces are: Western front, 150 divisions, 2,250,000 men; eastern front, 79 divisions, 1,185,000 (many of which are believed to be moving toward the west); Italian front, 7 divisions and 4 in reserve, 165,000; total 3,600,000. This agrees quite well with the estimate published some months ago, that the total initial military strength of Germany was about 7,000,000, of which the definitive losses for the first years were slightly over 3,000,000. Indeed, allowing for the half year of hostilities since Aug. 1, 1917, the agreement is surprisingly close. The large excess of man power among the Entente Allies and the full occupation of Germany's allies with their own problems, indicates that, even if Germany need to hold only the western front and have no serious economic problems, attrition alone will bring the war to an end in about 3 years more. Of course, the western front can be diminished in length but more by straightening salients than by retreat to any logical line which does not in itself virtually concede the issue of the war. Any advantage gained in this way will be equally advantageous to the Entente Allies and will scarcely diminish the casualties though it will, of course, lengthen the period required to complete the war by attrition. Actually, we shall be surprised if the war continues to the time limit of attrition. Such a contingency would be too highly analogous to the battle between the ram and the maul which continued till the handle of the latter and the tail of the former were worn down to a sliver and a hair respectively.

One set of statistics, estimates Germany's militia at 14 million—20% of the total population—the mobilization at 10,650,000 including the class of 1919, the definitive losses at 4 million or at 6 million according to French statements and also those by a socialist member of the Reichstag. Now it is undoubtedly a fact that Germany did have 14 million men registered in military units and well trained but the general

military axiom remains true that no country can maintain in the field more than 10% of its total population. The utilization of female labor and especially the labor of occupied countries undoubtedly gives Germany an advantage over most countries in this respect but a study of population by sex and age groups shows that, for various reasons, even these factors cannot increase the actual fighting forces much above the 10% standard except for a very brief period. To a large degree, the apparent contrast between Germany and her opponents lies merely in the fact that transportation and manufacture of a military nature as well as heavy toil generally is done by men technically listed as soldiers in the one case and as civilians in the other. The higher figures of definitive losses probably represent the inclusion of deaths and disablement not directly due to military casualties. It is simpler to ignore these and to accept the general principle that the recruiting of an army by the annual classes of youths will just about equalize non-military losses, just as the increase of the population as a whole cannot be increased by the up-rising generation, to any appreciable degree, within any period of a few years which may be regarded as the maximum duration of any modern war of great magnitude. To mobilize now, the class of 1919, is not only in a general sense drawing on interest not yet accrued but, while it may of course tide over a short period, it means a disproportionate susceptibility to both military and non-military losses.

It is interesting to note that Austria-Hungary, with a population of about 50,000,000 and an initial potential militia of about 5,000,000, is now estimated to have a force of only 1,239,000, whereas, proportionately to the first estimate of Germany's remaining man power, she should have about 2,570,000. The discrepancy may be exaggerated but it is true that the losses from all causes have been greater than for Germany, especially in prisoners, due perhaps to the lack of cohesion among the component national groups of the dual empire. Then, too, Austria-Hungary has lost considerably by disease of the older camp types, due to lesser sanitary efficiency.

Anthrax was discovered Feb. 1 in a cow near Attica Center.

The Shrinking Dollar. A certain type of statistics shows that the dollar, averaging 100 cents worth of purchasing power 1900-1906, as against 126 cents from 1896-1898 declined to 82 in 1914, 66 in 1915, 51 in 1916 and is now down to about 45 cents. This is undoubtedly correct for certain commodities, foods in particular but, after all, foods do not

comprise a very large part of the budget for the average family and the very poor laborer is getting about 250 cents for every 150 he got in 1896-8.

Newspapers are suggested as a backing for absorbent pads, instead of gauze, as a war economy.

Smoking by Nurses is discussed by a correspondent of the Trained Nurse, Feb. 1918. Smoking by women in England and various continental countries—though not France—is considered quite proper though army nurses are supposed not to smoke while in uniform nor while on duty. It is an open secret that many respectable American women smoke, though usually surreptitiously. It is regarded as quite probable that the use of tobacco by women will be increased during the war and some interesting social problems are suggested.

Simple Method of Estimating the Depth of a Foreign Body. Capt. A. Howard Pirie, a Canadian physician, compares the measurements of the shadow on plates at the surface of the body and at a known distance the calculation of the depth being easily made on the principle of proportionate triangles.

Volunteer Medical Service Corps. The Council of National Defense intends organizing for home service, the entire medical profession not available for active service. Due notice will be received by physicians and we trust that this locality will respond promptly and unanimously.

Protracted Gestation in Relation to Military Service. A captain in the R. A. M. C. sued his wife for divorce on the ground that she gave birth to a child 307 days after his departure. Testimony elicited histories of gestation of 298, 306 and 308 days under similar circumstances. Contradictory opinions were expressed and, as usual, the wife was given the benefit of the doubt.

Court Martial for Neglect of Meningitis Case. In regard to the press notices of a case and others of similar nature, we ask our readers to reserve decision till the findings of the court are published. The preliminary official report shows that the complaint that the body of the soldier was shipped wrapped in a sheet was not well taken as this is the proper procedure in infectious cases. The "deplorable" condition of the hospital is also admittedly due in part to lack of completion for which the medical officers were not responsible.

The court martial can be relied upon to do full justice to all concerned.

Veterinary Mal-Practice Suit. Damages were awarded in court at Lockport, Mch. 6, to a farmer of Niagara Co. to the amount of \$125 against a Buffalo veterinarian, for the loss of a colt.

Centenarians. Mrs. Sara Green died Mch. 6 in Ceres Township, near Bradford, Pa., aged 102 less 14 days. Mrs. Sally Gold of Williamsburg cast her first vote in March, at the age of 102. Incidentally, we may express a prejudice against any locality that holds an election on any date except the first Tuesday after the first Monday in November.

Cures by Quacks. Newspapers quite generally publish testimonies of this sort, with full names, street address and portrait. The testimony is direct, positive, unequivocal. It is the experience of the "masses" addressed to the masses. It can be assailed only on the basis of its ultimate truth. Is it not worth while for individual physicians to pay attention to this evidence and to meet it with equally direct, positive and unequivocal statements? Will our readers help?

Conserve Glycerin, Sugar and Alcohol. The U. S. Food Administration asks physicians to avoid the use of these substances in prescriptions so far as possible, even by selecting Galenicals that do not contain them.

Municipal Health Center. The fifth Buffalo institution of this kind has been opened in the old Tracy house at the corner of Court and Franklin Sts. Dr. Chas. Leone, city physician, will hold office hours at 8:30, 1-3 and 7-8. All persons needing free medical treatment—and we trust that a rigid exclusion of undeserving cases will be made—may apply in person or by telephone. Miss Laura M. Hamilton is the nurse in charge. Venereal clinics, especially for soldiers, will be held from 3 to 4 and 7 to 8 daily. Clinics in infant welfare, tuberculosis, for the feeble minded and dental, will be held 2-3 times a week.

Quartermaster Supplies for Officers. A bill has been introduced into congress, providing for the issue of uniforms and other equipment to officers. The object of the bill is not only to protect officers from profiteering but to secure uniforms that are uniform and to prevent the marked tendency to get as far as possible from standard tints, designs and

measurements as possible without having the equipment condemned.

Statistics of Medical Dept. of the Army. March 15. (Regular Medical Corps, 799—1 major general, 66 colonels, 102 lt. colonels, 177 majors, 2 captains, 451 lieutenants. Medical Reserve Corps, 18,037—1,085 majors, 4,163 captains, 13,789 lieutenants; on active duty, 14,655—937 majors, 3,579 captains, 10,139 lieutenants. Medical Corps, National Guard, 1,242—11 lt. colonels, 257 majors, 151 captains, 825 lieutenants. Medical Corps, National Army, 76—4 brigadier generals, 12 colonels, 55 lt. colonels, 5 majors. (This last is not in anyway limited to the supply of medical officers to the National Army, indeed medical officers are distributed according to convenience. The National Army medical corps seems to be used mainly for promotion of deserving officers when there is some obstacle to their promotion in one of the other corps and when the limitation to the period of the war is not a personal objection—and why any doctor would want to stay in the military service after the war is a mystery to most reserve men). Dental Corps, 210. Dental Reserve Corps, 5,124 of whom 1,337 are on active duty. Veterinary Corps 24. Veterinary Reserve Corps, 1,421, of whom 794 are on active duty. Veterinary Corps, N. G. 57. Veterinary Corps N. A. 297. Sanitary Corps 947. Ambulance Service 142.

The Alumni of the Medical Dept., University of Buffalo, will hold their 43d Annual Meeting June 5-7. Reunions of classes whose dates end in 3 and 8 will be held on the first day. Details will be issued later. Dr. Wm. F. Jacobs is Chairman of the Executive Committee.

Censorship of Articles by Members of the Medical Reserve Corps. By order of the Surgeon General, all medical officers publishing papers, will submit copy in duplicate to his office, for permission, upon receipt of which one copy will be forwarded to the journal designated. This is not a new regulation but is in accordance with paragraph 423 of the Manual of the Medical Dept., and applies to professional papers requiring reference to official records or based on experience gained in the discharge of duties. This journal has already complied with the spirit of this regulation and will enforce the letter.

Centenarians. Mrs. Kitty Brown Sutton, the oldest inhabitant of Orleans Co., N. Y., died at Two Bridges, Apr. 2, aged

100 less 1 month and 21 days. She was a native of London, Eng. Mrs. Hannah G. Leslie, the oldest inhabitant of Chautauqua Co., died at Jamestown, N. Y., Apr. 8, aged 100 years, 3 months, 8 days.

Births and Deaths of Buffalo. March 1918, respectively 1303 and 688. March 1917, 1272 and 772. First quarter of 1918, 3367 and 1954.

Casualties of American Army in France. For entire period up to April 2, 1918, 183 killed in action, 52 of wounds, 39 of gas or unknown causes; accidental deaths 164, by disease 793, by loss at sea, mainly from Tuscania, 793. Total deaths 1476. There were also 829 non-fatal wounds, 22 captures and 41 missing.

Summer School. Dr Chas. Bernstein, Supt. of the Rome Custodial Asylum, announces a summer course for teachers of the feeble minded in public day schools and institutions, July 1-27. Both didactic and practical instruction will be given. The only charge will be \$20 for board and lodging.

The National Board of Medical Examiners is holding a series of examinations for physicians at the training camps, a typic session including 5 days of written examinations and 6 of practical work in laboratories and clinics. The examination is said to confer the right to practice in all states and to take the place of formal examination for the government services, and it is expected that international reciprocity will be secured, at least for the Entente Allies.

"Milk for Babies." The Children's Bureau of the Dept. of Agriculture, from a study of 756 children aged 2-7 in Baltimore, finds that only 29% are now having fresh milk, as against 60% last year, and that only 3% are having as much as three cupfuls a day. As milk production is very directly influenced by the higher price of labor and the demand for cereal products, live stock, etc., it is now declared by many authorities that the minimum retail price of high-grade milk cannot be much less than 12c a quart, as against 5 or 6c for the ordinary commercial—and rather dangerous—product of a generation or less ago. While public schemes of subsidizing dairy industries or of furnishing milk to the poor below cost naturally suggest themselves, it is worth while considering whether it should not be put plainly before the public as a patriotic duty to do away with the use of milk as a beverage for healthy adults. Milk is necessary in the prep-

aration of various foods and for the nourishment of children and the sick; it is not a well balanced food for adults, nor economic for this class. Yet an enormous quantity is consumed in addition to an abundance of other foods.

Wheat Conservation by the Army. The white wheat bread of the U. S. Army is about the best product of the kind known, whether from the standpoint of nutrition or routine palatability. But the various combination flours and corn preparations, especially the nearly white corn meal of the south, are only slightly less valuable as food and are very palatable as a change. Soldiers generally relish the change, and there seems to be no reason why one or two wheatless days or several wheatless meals a week should not be adopted for the cantonments of this country at least.

Arsphenamine and Neoarsphenamine. The Hygienic Laboratory of the Public Health Service, Washington, noting the reports of unfavorable results from the use of American-made salvarsans, desires to test all samples that have appeared clinically to be unsatisfactory. Care should be taken to send ampoules of the same lot number as the one used. The patient's weight and age, dose and dilution employed, and clinical data of symptoms and results should accompany the sample.

Food Conservation as Indicated by Garbage. The diminution of garbage for N. Y. City for the first half of 1917 was only 9.16% (as compared with the last half of 1916) which is not unusual. 62 of 81 smaller cities showed reduction of the September garbage, this being the month when canning is usually at its height. However, it may be questioned whether this represents a genuine economy or a diminution of canning owing to high prices and the difficulty of securing sugar. Several cities have showed a notable diminution in garbage and nearly all waste of fats. Washington yielded 104.8% and Los Angeles 101.1% of the normal amount of garbage, but both have increased in population, the former markedly. The general impression is that while a considerable amount of food is still utilized that was formerly wasted, much further saving is possible. In this connection it may be mentioned that there is a strong tendency in military cantonments to reduce incinerators to a minimum, as wasteful of food, garbage that can be fed to pigs, metal and paper that can be re-used, as well as of fuel and of labor for their maintenance and for cleaning soot. In many instances, however, there is no local market for camp waste, even for man-

ure to be hauled away free. Thus the attempt to conserve waste costs more than destruction.

More Medical Reserve Officers Needed. April 8 there were on duty 15,174 Medical Reserve Officers (beside a few thousand not called additions to the regular Medical Corps, and National Guard and National Army surgeons). There is at present a comparatively small excess of surgeons immediately available and the Reserve Corps on duty is just about equal to the needs of the 1,500,000 force that will undoubtedly be in Europe before the close of the year. At a conservative estimate 15,000 more members of the Medical Reserve will be needed in the near future. Let us emphasize the fact not realized by many physicians, nor by the public generally, that the country needs, not a spontaneous patriotic uprising of surgeons or soldiers, without training, at the moment when an emergency has already arisen, but a farther-sighted patriotism that will provide an ample supply in advance of an emergency, and that will allow careful selection and training (three months at least). The complacent view of meeting an emergency when it occurs is due largely to reiterated false teaching about the Revolution. No subsequent war of the U. S. represented such adequate and prolonged preparedness. There had been universal militia training for the entire colonial period, with actual experience in war during the whole of the 18th century, and there was a large body of French and Indian War veterans, still in the prime of life available. Furthermore, so far as was possible without a formal government, and indeed, contrary to the existing governments, there had been preparation of an active nature for at least ten years.

BOOK REVIEWS

Books mentioned may be inspected at and ordered through this office. So far as possible, books received in any month will be reviewed in the issue of the second month following. Pamphlets, quarterly and similar periodicals, reports, transactions, etc., will, as a rule, merely be mentioned.

A Text-Book of the Practice of Medicine, by James M. Anders, M. D., Ph. D., LL.D., Professor of Medicine and Clinical Medicine, Medico-Chirurgical College Graduate School, University of Pennsylvania, Thirteenth Edition Thoroughly Revised with the Assistance of John H. Musser, Jr., M. D., Associate in Medicine, University of Pennsylvania. Octavo of 1259 pages, fully illustrated. Phila-

delphia and London: W. B. Saunders Company, 1917. Cloth, \$6.00 net; Half Morocco, \$7.50 net.

The twelfth edition of this book was published in 1915. Since then it has been extensively revised and entirely reset, making literally a new volume which preserves all those features that have made it so popular for the last twenty years. We note that the part on the disease of the nervous system—about 200 pages—has been rewritten; also several sections dealing with prophylactic vaccination, specific therapy, splenic anemia, the arrhythmias, intestinal toxemia, bacteriology of pertussis, hemolytic jaundice and pellagra. Among additions to the former text may be noted particularly acidosis, treatment of asthma, estimations of hepatic and renal function, anaphylaxis of food intoxication, focal sepsis, pneumococcic infections and pyorrhea alveolaris. In diagnosis, much emphasis is placed on differential features, many of which are brought into contrast in the 70 or more diagnostic tables. In presenting the treatment of disease due attention is always given to the author's main idea, which is "casual treatment." This book will continue to hold a high place among the working tools of the practitioner.

Diseases of the Chest and the Principles of Physical Diagnosis, by George W. Norris, M. D., Assistant Professor of Medicine in the University of Pennsylvania, and Henry R. M. Landis, M. D., Assistant Professor of Medicine in the University of Pennsylvania, with a chapter on the Electrocardiograph in Heart Disease, by Edward B. Krumbharr, Ph. D., M. D., Assistant Professor of Research Medicine in the University of Pennsylvania. Octavo volume of 782 pages with 413 illustrations. Philadelphia and London: W. B. Saunders Company, 1917. Cloth, \$7.00 net. Half Morocco, \$8.50 net.

One of the characteristic features of this book is the large number of frozen sections which have been photographed and utilized in an admirable way to illustrate the principles of physical diagnosis. They are the work of Dr. George Fetterolf, Assistant Professor of Anatomy in the University of Pennsylvania, and show unusual skill in the art of anatomic preparation. About one-third of the book—the examination of the lungs and circulatory system—is written by Dr. Norris. The remaining two-thirds, on diseases, is the work of Dr. Landis. Dr. Krumbharr contributes a comprehensive chapter on the electrocardiograph in which he takes a con-

servative stand as to the usefulness of the information derived from this instrument. Throughout the work the authors have maintained the proper balance between the various factors entering into the diagnosis of disease, presenting the pathology, physical signs and other data, clearly and faithfully. The illustrations are superb, the paper and typography are attractive, and the result is a truly sumptuous volume doing credit to authors and publishers.

The Practical Medicine Series. Comprising ten volumes on the year's progress in medicine and surgery, under the general editorial charge of Charles L. Mix, A. M., M. D., Professor of Physical Diagnosis in the Northwestern University Medical School. Price of Series, \$10.00. Chicago, The Year Book Publisher.

Volume VII. Obstetrics. Edited by Joseph B. DeLee, A. M., M. D., Professor of Obstetrics, Northwestern University Medical School, with the collaboration of Eugene Cary, B. S., M. D., Assistant Gynecologist, St. Luke's Hospital; Instructor in Gynecology, Northwestern University Medical School. Series 1917. Cloth, 12mo, 224 pages, illustrated, price \$1.35.

Volume VIII. Pharmacology and Therapeutics. Edited by Bernard Fantus, M. S., M. D., Associate Professor of Medicine, Sub-department of Therapeutics, Rush Medical College, Chicago, Ill.

Preventive Medicine. Edited by Wm. A. Evans, M. S., M. D., LL.D., P. H. D., Professor of Preventive Medicine, Northwestern University Medical School. Series 1917. Cloth, 12mo, 384 pages, illustrated, price \$1.50.

These books are intended primarily for the general practitioner, but the annual set including ten volumes allows the buyer to select those special subjects that he desires, if he does not wish them all.

Volume VII. gives a good choice of the representative papers of the past year. The value of these abstracts is greatly increased by the prudent comments of the editor, who does not believe all that he sees in print.

Volume VIII. covers about four times as many authors as the preceding book. It reflects the influence of our war, especially in the articles on "war time economy in drugs," "disinfection of ships," and "military hygiene."

SOCIETY MEETINGS

Brief reports and announcements of meetings of societies of Western New York, and those of general scope, are requested from Secretaries. Copy should be on hand the fifteenth of the month. Full transactions will be published at cost of composition.

"It was agreed at a meeting held in Paris on November 3rd, 1917, of delegates of the International Surgical Society from Belgium, France, Great Britain, Serbia and the United States of America, that:

1. The International Surgical Society be dissolved after the publication of the Volume of Transactions of the meeting held at New York City, April 14th, 1917. Should any money remain after the publication of the Volume, such money will be divided pro rata among members. Each member of the Austro-German group will receive his share; but the money belonging to members from other nations will be retained and applied to some object of scientific reparation in Belgium.

2. A new Society will be created after the war on a similar basis, to be called the "Inter-Allied Surgical Society." Surgeons of neutral countries may also be elected members."

Elmira Academy of Medicine. The regular monthly meeting was held at the Federation Building, Wednesday evening, April 3. Dr. Geo. M. Case, "Relation of Nasal to Eye Disturbances;" Dr. Chas Abbott. E. T. Bush, M. D., President. J. Lee Kinner, M. D., Secretary.

Rochester Academy of Medicine. A regular meeting of Section IV was held at the Association rooms, 33 Chestnut St., Tuesday, April 16. Differential Diagnosis and Treatment of Syphilis, (illustrated), Grover W. Wende, M. D., Buffalo. Curtis N. Jameson, M. D., Chairman. Franklin W. Bock, M. D., Secretary.

Buffalo Academy of Medicine, Section of Obstetrics and Gynecology. The Regular Meeting of this Section was held in the Academy Rooms, at Orpheus Hall, 423 Franklin St., Wednesday evening, April 17. Abnormal Obstetric Cases and their Treatment, Dr. James W. Markoe, New York City. H. K. DeGroat, M. D., Chairman. E. A. D. Clarke, M. D., Secretary.

The regular meeting of **Genesee County Medical Society** was held at the Holland Club, Batavia, at 8.30 p. m. April 10. Program: Dynamics of Hernia, Dr. Harry Trick

of Buffalo. Discussed by Dr. W. D. Johnson. Venereal Diseases, Dr. Edward Clark of Buffalo. Dr. Albert T. Lytle, president of 8th district branch was also present. Dr. Edgar Bieber of Byron, lieut. M. R. C., left for Base Hospital, Camp Dix, April 16. Edith F. Ryan, Secretary.

MILITARY PERSONALS

To Army Medical School, Wash., Capt. James C. Davis, Rochester.

To Belleville, Ill., Lieut. Edward F. Meister, Buffalo.

To Camp Gordon, Atlanta, Ga., Major Edward A. Southall, Buffalo.

To Camp Logan, Houston, Texas, Lieut. Ward W. Millias, Rome.

To Camp Shelby, Hattiesburg, Miss., Lieut. Raymond B. Morris, Olean.

To Fort Oglethorpe, Ga., Capts. Maxwell K. Willoughby, Auburn; A. L. Benedict, Buffalo; Lieut. Earl C. Holden, Canastota.

To Fort Riley, Lieut. Andrew J. Goodwin, Ithaca.

To Fairfield, Ohio, Lieut. Milton H. Goldberg, Buffalo.

To Newport News, Va., Lieut. George D. Ubel, Salamanca.

To New York City, Lieut. Walter L. Weeden, Clifton Springs.

To office of Surg.-Gen. Wash., Lieut. John P. Sharp, Niagara Falls.

To Army Medical School for instruction: Lts. Samuel Barone, Raymond Hensel, Porter A. Steele, Buffalo; E. H. Parizot, Cohocton; Roy J. Juhre, Fredonia; John F. Healey, Hornell.

To Camp Hancock, Augusta, Ga., Base Hospital, Lt. Amos J. Minkel, Hamburg; Lieut. Guy Granger, Sherman.

To Camp Lee, Petersburg, Va., Base Hospital, Capt. Willis S. Cobb, Corning; Lt. Antonio L. Barone, Buffalo.

To Camp Upton, L. I., Base Hospital, Capt. Walter H. Vosburg, Dunkirk.

To Curtis Bay, Md., Lt. G. J. Busck, Westfield.

To Ft. Oglethorpe, Ga., for instruction, Capts. Chas. H. Gallagher, Ithaca; Myron B. Palmer, Rochester; Lt. Francis Argus, Rochester; Lt. Samuel Grionstein, Lt. Frederick E. Strozzi, Buffalo.

To Neurologic Institute, N. Y. City for instruction in orthopaedics, Lt. Leonard S. Nolan, Syracuse.

To Rockefeller Institute and on completion to return to Camp Greene, Capt. Coreen T. Graham, Rochester.

To Williamsburg, N. Y. for duty, Lts. Frank Kruse and

Chas. C. Panzarella, Buffalo; Carl G. Schwan, Danville; Jacob Sacha, Rochester.

Major Francis E. Fronczak, Health Commissioner of Buffalo, spoke on the Pole in America at the meeting of the Civic Education Assn. Apr. 2 shortly before entering upon active military service. Dr. Franklin C. Gram, for many years Registrar of Vital Statistics will act as Health Commissioner during Major Fronczak's absence.

Lt. Col. J. George Adami of Montreal, our Associate Editor writes from London, where he is stationed at present.

To Camp Dodge, Des Moines, Iowa, Lieut. David R. Melten, Rochester.

To Camp Sevier, Greenville, S. C., Major Frederick J. Barrett, Buffalo.

To Fort Porter, N. Y., Lt. Barton E. Hauenstein, Buffalo.

To Hoboken, N. J., Capt. Frederick Terwilliger, Spencer.

To Cornell University, Capt. Samuel A. Munford, Ithaca.

To Rockefeller Institute, Lieut. Harold J. McDonald, Buffalo.

To Camp Devens, Ayer, Mass., Lt. John A. Wentworth, Clifton Springs.

To Camp Upton, Long Island, Capt. Ralph E. Brodie, Albany; Capt. Walter H. Vosburg, Dunkirk.

To Camp May, N. J., Capt. Samuel R. Hurlburt, Lockport.

To Corpus Christi, Texas, Capt. Alfred W. Armstrong, Canandaigua.

To Fort H. G. Wright, N. Y., Lt. Adelbert C. Abbott, Syracuse.

To Fort Oglethorpe, Ga., Capt. James C. Davis, Rochester; Lieuts. Hiram S. Yeklen, Buffalo; Francis J. McCulla, Frewsburg; John A. Johnson, Olean; Porter A. Steele, Buffalo.

To Fort Riley, Lieut. Carl G. Frost, Buffalo.

To Mineola, L. I., Capt. Edwin S. Ingersoll, Rochester.

To Rochester, Base Hospital, Lt. Hiram Randall, Rochester.

To Rockefeller Institute, Lt. Martin E. Nolan, Tonawanda.

PERSONAL

Announcement of removal, travel, and other matters of interest are requested. Please report errors in the listing of any physician in the State and other directories, that we may co-operate with the State Society in securing a correct list.

Dr. Marcel Hartwig of Buffalo left April 1 for an extended western and southern trip. Some of his friends surprised him with a dinner and presented him with a traveling bag, having lured him to the Lafayette Hotel "to see a patient."

Dr. B. F. Ilston, Coroner of Chautauqua Co., has been commissioned Captain in the Reserve Corps and left for Ft. Oglethorpe, April 9.

Dr. Lawrence G. Hanley has returned from a trip to Florida.

Dr. George F. Rogan of Medina, was married to Miss Ethel Hughes Beechem, Apr. 3.

OBITUARY

Readers are requested to report promptly the death of all physicians in Western New York, or former residents of this region, or graduates of any medical school in Western New York, and to notify the families of the deceased of our desire to publish adequate Obituary notices.

Dr. Ora N. Latham, Univ. of Md. 1882, died at his home in Bolivar, N. Y., Feb. 14, of heart disease.

Dr. John Hutchens, Buffalo 1871, died at his home in Cheshire, N. Y., Feb. 23, aged 68.

Lieut. Harold F. Mickley, N. Y. Homeopathic Med. College 1912, died March 16 at the Base Hospital, Camp Dix, Wrightstown, N. J. His home was in Seneca Falls.

Dr. Charles A. O'Dea, Erie Pa., Niagara University Medical Department, Buffalo, 1895, died March 9, age 43.

Dr. George F. Harris, Buffalo; Cornell University Medical College, New York City, 1904. He was a member of the medical staff of the Buffalo State Hospital. He died March 18.

Dr. Linus J. McAdam, Barker, N. Y., Niagara University, Medical Department, Buffalo, 1890. Died March 17, age 59. He practiced medicine in Buffalo for many years.

Dr. Lacy B. Darling, Long Island College Hospital, 1893, died at his home in Palmyra, Feb. 19, age 54.

Dr. Raymond A. Clifford, University of Michigan, Homeopathic Medical School, 1898, Jefferson Medical College, 1899, died in the Clifton Springs Sanitarium March 2, age 44. His home was in Ypsilanti, Mich.

ABSTRACT

Hodgkin's Disease. C. C. Simmons and Geo. Benet (sic), Boston M. & S. Jour., Dec. 13, 1917, report on cases seen at the Huntington Memorial Hospital, Apr. 1913-July 1916. 31 cases clinically diagnosed, applied for treatment. 3 proved to be lympho-sarcoma and 1 metastatic carcinoma, in 5 no specimen was obtained and 3 were examined in other hospitals and the data were considered inadequate. Thus 19 cases were established. The diphtheroid bacillus described by Bunting and Yates has been found in most cases examined by many authorities. Rosenow found it in 38 of 40 cases. The authors report positive findings in 2 out of 3 cases examined (Ordway). Inoculation experiments produced tuberculosis in a monkey from 1 case, resulted negatively in a monkey in another, negatively in a monkey and guinea pigs in another, negatively in guinea pigs in another. A portion of a gland removed for examination was re-implanted under the skin of the same patient, remained palpable for several days and disappeared (Tyzzler).

Incidence by sex was 6 females to 13 males, corresponding approximately to Zeigler's 71 females to 149 males, total 220. The distribution by decades, from 10 years upward was, respectively: 6, 8, 3, 2, (40-50). The duration, from the first symptom noted till death averaged 18 months as against 30 months for the three lympho-sarcoma cases. 6 cases lasted less than a year; 4 1-2 years; 2 2-3 years; 1 case 5 years and 1 8 years.

The blood counts were quite variable, though the relationship to stage of the disease is not very well shown. The reds varied from nearly $6\frac{1}{2}$ million in one case and from more than 5 million in several others, down to about half the normal. The whites, from 35,000 to 1,000. The haemoglobin corresponded pretty well to the red count, often somewhat low relatively. Polymorphic cells were mostly in the range of 80% and upward to 90% but were only 52 and 57% respectively in two counts. Temporarily good results are reported from X-ray and radium but 5 cases survive being rated: 1 in poor condition, 2 each in fair and good condition.

Parotidites of Malarial Origin. Laurent Moreau, Le Prog. Med., Nov. 10, 1917, considers these cases fairly frequent, due to extension from the frequent stomatitis, along the duct of Steno. The condition is usually bilateral abscesses from, containing streptococci and staphylococci. Fistulae are apt to prove troublesome.

Indicanaemia. Tcherkoff, quoted in *Med. Rec.*, uses the following simple test: About 8-10 c.c. of blood serum is obtained in the usual way and treated with an equal quantity of 20% trichloroacetic acid to precipitate protein and filtered. The clear liquid is tested like urine for indican, with strong HCl containing $\frac{1}{2}\%$ of ferric chlorid, the color varying as for urine from a very pale up to a deep blue color. The rose or rose-violet color due to iodine may cause confusion so that, unless deliberately used as a rough test for iodine in the blood, all iodine medication should have been discontinued for some days before applying the test. As in the case of urine, quantitation by comparison of control color solutions may be employed. Normally, indican should be entirely absent and it is claimed that any appreciable coloration indicates an azotaemia (non-proteid) of 1.5% or more and is always due to renal insufficiency. (It may be questioned whether indican might not appear in the blood without renal insufficiency, in cases in which an excess of indol in the intestine is being rapidly excreted and showing as marked indicanuria.)

Abdominal War Wounds. Miginiac, *Le Prog. Med.*, Nov. 10, 1917, reports 64 penetrating and 36 non-penetrating wounds. 10 of the former were treated by Murphy's operation, all died. In 4, operation was deliberately avoided. 3 died, one, with wound of the bladder recovered. 14 inoperable cases all died. 35 laparotomies were performed: 8 with penetration but no visceral lesion, 5 deaths and 3 cures; 22 with lesion of a single viscus, with 15 deaths and 5 cures (sic); 5 cases involving various viscera, all dead. Total mortality, 74%. The highest mortality occurred in penetrations without visceral wound.

Quenu, *ibid.*, Nov. 3, 1917, reports 34 penetrating wounds. In 13, no operation was performed, 4 deaths and 9 cures, 4 being considered inoperable. 1 case was operated by the Murphy method and died. Of 20 laparotomies, 11 died.

Hepatoptosis With Gaseous Intestinal Cysts. Laurent Moreau, *Arch. d'Electricite Med.*, Sept., 1917, reports a case in a man aged 35, non-syphilitic, of unexplained origin, in which the diagnosis was made largely by radiology. The stomach was vertical and extended almost to the pubes. The shadow of the liver was distinct and above it, beneath the arch of the diaphragm, was a clear space, evidently indicating gaseous distension. The case was considered hepatoptosis by interposition, i.e., loops of intestine or some similar interposed body causing the liver to descend. Beclere had re-

ported such a case due to a subphrenic abscess, in which gas had developed and Aubourg had reported an analogous case, not of hepatoptosis but of the interposition of a loop of colon in a fossa on the upper posterior surface of the liver. (Note: physical examination not very rarely suggests the interposition of intestine between the anterior abdominal wall and the antero-superior surface of the liver, though many such cases are undoubtedly deceptive). In the present case, the gaseous filling above the liver was due to gaseous intestinal cysts which are very rare, only about 50 cases in all having been reported in the literature, and whose pathogeny is not well understood. Turnure and Mauclair have each reported a case quite in analogy with the present one. So far as known, these are the only three cases of this particular type of hepatoptosis by interposition thus far reported.

Prognostic Value of Blood Count After Haemorrhage and Transfusion. Depage and Govaerts, (Belgian Army), *Le Prog. Med.*, Nov. 10, 1917, state their experience to be that, after a haemorrhage sufficiently large to endanger life, and transfusion, if the red cells do not rise above 4 million in the venous blood within 6 hours, a fatal prognosis is almost always justified. Injections of artificial serum are not considered of value.

Diagnosis of Pregnancy by Radiography. Albert Weil, *Paris Med.*, Apr. 21, 1917, quotes Lacquerriere as having shown a plate of a foetus of $4\frac{1}{2}$ months, expressing the opinion that this was the earliest limit. The author showed a plate at the fourth month, the diagnostic value being especially marked as the mother was only 15 years old, had an intact hymen and denied the possibility of pregnancy, which could not be established by auscultatory signs.

Gelatinous Barium for Roentgenology. Belot and Frauday, *Bull. de l'Acad. de Med.*, Jan. 16, 1917, describe a new chemic form of barium of a creamy consistence, more agreeable to take, less liable to sedimentation and susceptible of incorporation with solid food, liquids or by itself. It is also claimed to be cheaper than the sulphate. The method of preparation is not described.

Radiography of the Appendix. M. Cohn, quoted in *Arch. d'Electricite Med.*, Oct., 1917, claims that the appendix is usually visible by radiography. It fills with bismuth sometime after the entrance of the latter from the ilium into the caecum, probably on account of retrograde peristalsis of the

colon. It may remain filled after the caecum has cleared itself, or it may fill and empty itself several times while the caecum is filling. On account of its great motility, the appendix assumes various forms which should not be mistaken for pathologic conditions.

Photography of Radioscopic Images. Egon Hartung, quoted in *Arch. d'Electricite Med.*, Oct. 1917, advises the use of a screen without lead glass, emitting a bluish fluorescence, special photographic objectives and a localizing cylinder of lead, impermeable to the rays. A very fine focus and ultra-sensitive photographic plates are necessary, the latter such as are used for astronomic observations. He has adapted the apparatus to cinematography.

Shrapnel Ball Encysted on the Anterior Wall of the Ascending Colon. Mauclaire, quoted in *Arch. Med. d'Electricite*, Sept., 1917, reports a case, operated on under electric light, switched off to use X-rays to locate the ball on the screen, and on again when the ball was firmly grasped after the preliminary incision and location. It was surrounded with false membrane and was excised without opening into the peritoneal cavity. (Note: Having had the results of intestinal adhesions, especially about the appendix stump and the caecum brought to our attention many times in civil practice and in a surprising number of cases in a brief military experience, where the genuineness of the complaints made by the patient is a serious problem not encountered in civil practice except in marked neurotic cases, the question may be raised whether it was wise to avoid the slight danger of peritoneal invasion by leaving the cicatricial tissue. Ed.)

Attempted Suicide With Adrenalin. Raymond Grasset, *Le Prog. Med.*, Oct. 20, 1917, reports the case of a druggist's chore-boy with advanced pulmonary tuberculosis. He took 15 grams of a 1:1000 solution of adrenalin and, 5 minutes later a second dose of 20 grams. Somewhat later, he took a third poison, probably scammonium, in unknown dose. Two hours later, he admitted the attempt at suicide and was given an emetic, bled and given inhalations of amyl nitrite. The principal symptom was marked stiffness of the neck. Later he received injections of caffeine and camphorated oil and lavage with chloral on account of persistent agitation. He recovered completely in two days.

The Effect of Certain Drugs Upon Skin Reactions. John A. Kolmer, Samuel L. Immerman, Toitsu Matsunami, and

Charles M. Montgomery. *The Journal of Laboratory and Clinical Medicine*, Mch. 1917. Illustrate the various confusions of reactions with luetin and tuberculin tests and report laboratory studies of the strengths necessary to cause phagocytic and other reactions. (Cuts by courtesy of authors and publisher). They summarize as follows:



1. The iodides and particularly potassium iodide were found to influence the luetin and prodigiosis intracutaneous tests to a marked extent. Normal non-syphilitic persons, reacting negatively in the luetin test, may show marked reactions when tested after the oral administration of sixty or more grains of potassium iodide.

2. The bromides of potassium and sodium in the same dosage were found to have a similar but less marked influence.

3. The chlorides of potassium and ammonium in the same dosage were found to influence the prodigiosin reactions but not the luetin reactions except to a very slight extent.

4. The administration of the protiodide of mercury influenced the luetin reaction to some extent.



5. It is probable that the administration of larger doses of these drugs would exert a more marked influence upon skin reactions.

6. Ether and chloroform anesthesia did not appear to influence skin reactions.

7. Substances most likely to excite inflammatory reactions in the skin appear to be most readily influenced by the

iodides and to some extent by bromides; intracutaneous tests with agar-agar, prodigiosin and ordinary luetin were more readily influenced by these drugs than the reactions following the injection of a luetin of washed spirochetes and free of culture medium.

8. Cutaneous tests are not as readily influenced by these drugs as intracutaneous tests.



9. Conjunctival tests among normal rabbits to tuberculin were apparently not influenced.

10. Cutaneous and intracutaneous reactions to tuberculin among persons reacting positively to both, appear to be rendered more extensive by potassium iodide and to a lesser extent by potassium bromide.

11. Anaphylactic reactions to luetin in syphilitic persons

appear to be rendered more extensive by potassium iodide and potassium bromide.

12. The oral administration of potassium iodide and to a lesser extent of potassium bromide, increased the phagocytic power of the blood serum for *B. prodigiosus*; the increased severity of skin reactions in persons taking these drugs may be due to heightened leucocytic infiltration and phagocytosis



about the injected material or to an increase of tryptic activity through the saturation of fatty acid radicals according to the hypothesis of Jobling and Petersen.

13. Physicians should very carefully rule out the possible influence of these drugs before conducting skin reactions.

14. It is probable that these drugs have influenced the luetin reactions as clinically applied and have been responsible in part for the divergent results observed and reported.

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BUFFALO MEDICAL JOURNAL

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ORIGINAL ARTICLES

The right is reserved to decline papers not dealing with practical medical and surgical subjects, and such as might offend or fail to interest readers. Contributors are solely responsible for opinions, methods of expression and revision of proof.

Pellagra as it Occurs in Buffalo and Vicinity

By GROVER W. WENDE, M. D., Buffalo, N. Y.

The sudden, widespread and remarkable frequency of the occurrence of indigenous Pellagra in the United States constitutes a unique chapter in the medical history of this country. Prior to 1907, Pellagra was very seldom recognized in America. The isolated cases reported before 1907 occurred in foreign born individuals who either came to the United States with the disease in full efflorescence or, subsequently developed it.

In 1864, Dr. John P. Gray, first reported the occurrence of Pellagra in the State of New York and the history of Pellagra in the Empire State begins with the publication of this case. The patient was a foreigner and an inmate of the Utica State Hospital. Little more was heard of Pellagra in New York until 1882, when Dr. Samuel Sherwell of Brooklyn reported its occurrence in an Italian sailor. He reported a second case of this disease in 1902, also in an Italian sailor. With the possible exception of two or three cases appearing in other parts of North America these New York cases were the only ones occurring in the United States reports of which were published before 1907. In 1907, Pellagra cases began to be reported in startling numbers from the Southern States and especially from institutions for the insane. Since then the disease has appeared with ever increasing frequency in all the states, in some even taking on the aspect of an epidemic.

The first cases of Pellagra indigenous to the State of New York were reported by both Caccini and the author. Subsequently, indigenous cases were reported by Robbins, Spangenthal, MacKee, Wise and Lautman, Winfield, and Potter.

That these do not represent all the indigenous cases is shown by the statistics of the New York State Department of Health and that of the City of New York wherein are recorded in 1912 one death, in 1913 four deaths, in 1914 sixteen deaths, in 1915 ten deaths, in 1916 twenty-seven deaths, and in 1917 twenty-seven deaths, either primarily or secondarily due to Pellagra. Outside of the City of New York fifteen of the twenty-six pellagrins dying and reported in 1916 and 1917 were inmates of state or other hospitals.

Pellagra prevails with greater frequency among women than among men. No period of life seems to be exempt from its ravages although it occurs most commonly during adult life,—between the ages of twenty and fifty. Inhabitants of rural districts seem to contract the disease with much greater frequency than those living in towns. The poor and ill-nourished are particularly prone to Pellagra, although in the Southern States the well-to-do are frequently attacked.

SYMPTOMATOLOGY.

The symptomatology of Pellagra is best considered under three heads. In order of importance for diagnosis these are (1) Skin manifestations, (2) Alimentary tract manifestations, and (3) Nerve and Mind manifestations.

The cutaneous eruptions of Pellagra are highly characteristic. At present they are the principal determining factors in making a positive diagnosis, nevertheless Pellagra may be present without skin lesions. The skin manifestations frequently occur in so-called "stages,"—erythema, edema, pigmentation, desquamation, bullae formation, ecchymoses, and pyogenic infection. However, these "stages" are but manifestations of the degree of activity of the disease process and of its progress; there is no sharply defined "stage" for all may be present at any one time and they shade into each other.

The eruption begins suddenly nearly always in the early days of spring as an erythema usually symmetrically disposed on the backs of the hands. The arrangement and location of the skin lesions of Pellagra are particularly characteristic. Although now and then involving parts of the body protected from sunlight by clothing or much hair the disease attacks only those portions of the person usually uncovered, unprotected. The erythema very rapidly assumes a brilliant hue. A moderate amount of swelling of the skin is usually present from the very first. The outlines of the diseased patches are very sharply defined, much more so than those resulting from simple sunburn. As the disease advances the color of the lesions deepens to a reddish-brown or even to a chocolate hue. After ten or more days, desquama-

tion begins in the lesions and a rough and scaly surface is produced. Where the disease process is very active, vesicles and bullae develop upon the erythematous base in which are often found ecchymoses. Secondary infection with the ordinary pyogenic organisms may follow. As the vesicles and bullae desiccate, thick crusts are formed and exfoliation of large masses of epithelium takes place, leaving behind raw, red surfaces. If the process is less acute, the skin surfaces are thick, hard, rough, scaly and often pigmented; the elasticity of the skin in these areas is lost, producing fissures and an exaggerated width and depth to the normal lines of the skin.

Upon the backs of the hands are found the most striking and typical cutaneous manifestations of Pellagra. The lesions affect both hands in a notably symmetrical way. When fully developed they spread from the radial to the ulnar side of the dorsum of the hands even so as to include the fingers and knuckles; the palmer surfaces are attacked with extreme rarity, while lesions may involve a small triangular area on both the extensor and flexor surfaces of the wrists. The full typical involvement is often spoken of as the "pellagrin's glove." The manifestations may appear upon the dorsum of the feet even involving the toes, which when classic are known as the "pellagrin's boot." Next in frequency to the hands the process involves the neck usually as a broad band or collar called "Casal's necklace" or "cravat," which has many modifications. The process also occurs in asymmetrical and isolated areas such as the flexion of the elbows, the knees and the axillary folds as well as about the genitalia and the perineum.

The majority of pellagrins are dyspeptic, the dyspepsia being usually of a painful and flatulent type. The alimentary symptoms persist even when the other manifestations of the disease disappear; this is particularly noticeable in the winter during which season the cutaneous symptoms improve and those of the nervous system subside. The mouth, the pharynx, the esophagus, the stomach, and all divisions of the intestines may take part in the pellagrous process. Many observers believe that the gastro-intestinal symptoms are the result of changes in the alimentary mucosa similar to those occurring in the skin, and that as the disease progresses involved areas of the mucosa undergo ulcerative changes. The actual digestive power is frequently good notwithstanding the presence of severe symptoms.

Pellagrins complain of burning sensations in the mouth; the mucous membrane will then always be found to be hyperemic; as the disease progresses other lesions of a

stomatitis even to sloughs and bleeding are to be found. The tongue takes part in the pellagrous changes and when it is denuded of its epithelium but not ulcerated, it assumes a peculiar carmin color that is almost pathognomonic. The onset of these conditions in the mouth makes mastication and deglutition painful and difficult. When gastric burning is present it is unaccompanied by any chemical evidence of hyperacidity; repeated examinations of the expressed stomach contents always have shown a low total acidity, no excess of fermentation acids, and the hydrochloric acid content both free and combined to be below normal. The severe attacks of gastralgia that come later in the disease often occur in paroxysms that resemble the gastric crises of tabes, and, sometimes cause vomiting. While constipation is rather frequent early in Pellagra, it is more likely to alternate with diarrhea; the diarrhea occurring early is a spasmodic phenomenon; in grave and fatal cases diarrhea is especially severe and difficult to control. Diarrheas in Pellagra are of two varieties,—one, common early in the disease, is dysenteric in character with colic and with muco-sanguinolent discharges; the other which is present in the later and progressive periods of the disease consists of watery stools that are important factors in producing cachexia. The odor of the bowel discharges is peculiarly offensive probably as the result of putrefactive changes.

Ordinarily the manifestations of Pellagra involving the mind and the nervous system are present when a pellagrin first comes under observation; such are sure to arise during the course of the disease and to have more or less frequent remissions until toward the end when they become continuous and often overtop all other symptoms. Some observers take the stand that all the symptoms in Pellagra of whatever nature are due to some as yet obscure toxic disorder of the brain and nervous system. The psychic manifestations may be ill-defined,—only indicated in the existence of a greater degree of psychic excitability than the normal for the given case. Vague apprehensions, anxiety, unrest, and fears that even may become phobias make up the psychic picture in some cases; in other cases lassitude, depression, mental incapacity, self-depreciation, self-accusation, persecutory ideas and the refusal to take food are the principle psychic features. The patient is often silent with a dull look and a serious countenance which have given rise to the saying,—“He looks as if he had forgotten how to smile.”

The first attack of complete insanity supervenes after Pellagra has existed for several years during which several remissions of the skin and the alimentary as well as of the

nervous and mental symptoms have taken place. Some observers regard the pellagrin insanities as something apart and different from typical melancholia or typical mania; the attacks seem to pass through two phases,—the first one showing early may be classed as an amentia; the other showing later in time being classed as a dementia. In the very late periods of the disease as it progresses toward fatal termination, a chronic mental confusion, or a “pellagrous pseudo general paralysis” may supervene.

Purely mental symptoms may be replaced by manifestations involving the cerebro-spinal nerves or such may be added to the psychic disturbances. Of such are headache, vertigo, meningitis, myelitis, neuralgia, polyneuritis, paresthesia and epilepsy. There usually is present as evidence of spinal irritation,—an increase of tendon reflexes, an increase of muscle excitation with tremors of the fingers and with rigidities and spasms of the leg muscles, a spastic gait, a diminution of the tactile, thermal and faradic cutaneous sensibility, or, an ataxia of the lower and in rare cases of the upper extremities; tonic muscle spasms may be the only nervous symptoms present in a severe Pellagra.

ETIOLOGY.

The immediate and direct cause of Pellagra has not as yet been determined. It has shown a very marked association with chronic gross alcoholism so much so that the abuse of alcohol is an important predisposing factor. An exposure to a considerable degree of intensity of the actinic rays of the sun, direct or indirect, is an essential for the development of the cutaneous manifestations.

For years a diet consisting chiefly of corn,—maize,—was supposed to be the causal factor in producing Pellagra,—the so-called “vitamin” theory. The corn was thought to be lacking in some particular nutritive element necessary to the human economy or else it contained a substance toxic to the human organism,—a substance normally present in the grain or else the result of changes due to more or less decomposition.

In Buffalo, one of the principal ports in the United States for the handling of corn in transit, are located large grain elevators, driers and mills; not only are these used for the transshipment, but also for the handling of grain which has been overheated in the vessels arriving in port,—a quite natural phenomenon taking place in large masses of improperly cured grain, especially of corn. The writer investigated the movement and disposition of the corn received at Buffalo in 1910, and found that twenty millions of bushels of corn had been received, handled and reshipped. Much of

this vast quantity arrived in a more or less overheated condition; in the process of cooling and drying with fans such grain was handled several times before it was in a condition fit to leave Buffalo for its destination. The comparatively small amount of corn which was in so damaged a condition as not to be accepted by the consignee, was kiln-dried, ground and sold as chicken feed and hence not used as human food. While some of these millions of bushels of corn was exported most of it went to the New England states for home consumption.

Recalling that much of the corn reaching the port of Buffalo is in a state of at least mild fermentation, and that much of it is subsequently used as an article of human diet, it is interesting to note that in the states to which it is transhipped there has been reported the occurrence of but an occasional sporadic case of Pellagra. On the other hand, an equally interesting observation is that those states reporting the occurrence of large numbers of cases of Pellagra and those states in which the disease is endemic, all receive large consignments of corn from the same sources from which comes that passing through the port of Buffalo. As corn from a common source is freely consumed in both sections and, as Pellagra is practically unknown in the Eastern states while it is prolific in the Southern states, the vitamin theory of the etiology of Pellagra with maize as the dietetic source is not upheld by the experience of the United States.

Another theory that Pellagra is an infection resulting from the introduction into the human body of a specific infective material by the sting of the sand-fly or buffalo-gnat has not been positively demonstrated.

Another theory is that Pellagra results from long continued restricted diet consisting very largely of one kind of carbohydrates. Goldberger and his associates tested this theory by segregating twelve volunteer adult, white, male prisoners at the Mississippi Penitentiary,—wherein Pellagra had never been observed,—and causing them to live on a restricted diet. At the end of six months, the six prisoners who had persisted showed evidences of Pellagra. The skin manifestations first appeared on the scrotum, while both gastro-intestinal and nervous manifestations were noted. As none of the other prisoners living under the same sanitary environments but upon a regular diet developed the disease, the observers concluded that the restricted diet caused the Pellagra that occurred.

Another theory is that Pellagra is the result of drinking water in which there is a relative excess of colloidal silica,—an element largely present in water from clay soils. An en-

thusiastic supporter of this theory declares that there is no analogy whatever between Pellagra and Beriberi, or between Pellagra and Scurvy; that the vitamin theory is falsely drawn from unscientific observations made to bolster preconceived ideas; that (1) "Pellagra is a chronic acidosis caused by colloidal silica in drinking water coming from clay soils," that (2) "Pellagra is a disease strictly localized and contracted only in those regions where the water commonly drunk originates in clay soils," and, that (3) "Pellagra has no relation to diet, work, domicile or sanitary environment."

PATHOLOGY.

The postmortem findings in cases dead with acute Pellagra are in general those produced by an acute poisoning. The perivascular infiltration indicates general systemic intoxication. There is an indirect chromatolysis of nerve cells, astrocytosis, and, the presence of ameboid glia cells. No evidence of infection of the nervous system by microorganisms has been found. The autopsy in cases with chronic Pellagra shows no definite pathology that can be attributed solely to Pellagra; although there have been noted fatty and fibroid degenerations, chronic alterations in nerve cells, an increase of glia fibers, a permanent destruction of nerve fibers, and, a marked increase of amyloid bodies.

The pathological findings in the intestinal mucosa have been those of hyperemia, while ulcerations were not uncommon. The other viscera have shown chronic, particularly fatty, degenerative changes with marked pigmentation. The pathological changes in the skin present nothing characteristic; they are chiefly those of inflammation. The epidermis is at times thinner than normal while at other times it is thickened with considerable hyperkeratosis; there is a pronounced increase of pigment in the lower cells of the retina. In cases having repeated attacks of dermatitis there has been found atrophy of the corium, of the epidermis, and of the nerves of the corium of such permanent character that it may be considered as secondary. The nerves of the skin have been found to exhibit evidence of a combined inflammatory and degenerative process with the disappearance of many axiscylinders.

CASE HISTORIES.

Case No. 1. (Buffalo Medical Journal, May, 1911). The first indigenous case of Pellagra in Buffalo. E., white housewife; aged 33; born and always lived in Buffalo. Mother of three children. Manifestations first noted in 1906, a few months after birth of last child and a few weeks after a pelvic operation. Nothing in the family or the personal his-

tory, habits, environment or diet to suggest Pellagra as the cause of the patient's symptoms. First noted undue fatigue from exertion, marked weakness of legs causing unusual gait and finally simulating paralysis. Later, mental depression appeared ending in an attack of acute mania which lasted but a short time; this was succeeded by great depression. Although the tongue often showed the characteristic scarlet-red appearance the gastro-intestinal manifestations and diarrhea came late in the course of the disease. The skin manifestations present when referred to the author came on about four months preceding her death in 1910; the dermatitis began as a marked erythema with subsequent scaliness, thickening and pigmentation; the almost pathognomonic symmetrical, triangular distribution on the backs of the hands and wrists was easily distinguished from other cutaneous diseases and made the diagnosis positive. No autopsy was obtained.

Case No. 2. (Buffalo Medical Journal, April, 1915), by Spangenthal. L. K., single, druggist, white, male; aged 35; born in Pennsylvania and lived in a small northern Pennsylvania town. Family and personal history negative. Used alcohol in great excess especially just preceding observation; habits otherwise fair; nothing otherwise unusual or indicative in environment or diet. When first seen his mental condition was fair with the exception that he worried greatly over trifles. Gastro-intestinal manifestations were such as are found in alcoholics. Consulted Dr. Spangenthal in the Spring of 1915 for skin trouble at which time Pellagra was recognized and the diagnosis made. The buccal surfaces showed the usual bright-red appearance and at a little later date the diarrhea became manifest. The backs of the hands presented symmetrical bleb lesions which upon rupture in a short time left marked crusting, followed later by the pigmentation characteristic of the disease. After the administration of salvarsan there was an apparent improvement which subsequent events demonstrated to be the result of the stoppage of the ingestion of the large quantities of alcohol. He continued greatly improved for a period of one year after which he began to drink in excess which brought back a marked cutaneous outbreak accompanied by diarrhea. He lived for about two years after coming under observation. No autopsy.

Case No. 3. H., single, saloon-helper; white, female; aged 24; born and always lived in Tonawanda, New York. Family and personal history negative except that the patient had had periodical attacks of diarrhea for the year preceding her entrance to the Buffalo General Hospital, June 1, 1913, and also

had had a poor appetite but as she was a large imbibor of alcohol such symptoms might not be unusual.

General examination on admission demonstrated a fair condition with temperature of 102° , pulse rate of 110 and respirations 32; there was a congenital malformation of the digits of both hands. The patient was very emotional showing rapid changes from violent weeping to outbursts of temper. Later she became melancholic and toward the end became comatose. She swallowed with difficulty and her oral mucous membranes were intensely red and ulcerated; the same condition was found in the rectum and the vagina. The skin manifestations upon which the diagnosis was made were characteristic of Pellagra and were symmetrically placed upon the backs of both hands, the forearms, the face and the feet, while about the neck was a faint "Casal's necklace." Upon the backs of the hands were patches denuded of epithelium, in which were considerable sized irregular areas containing many ecchymoses and covered with a serous exudate. Upon the face especially on the nose and adjacent areas was found a marked condition of comedones.

Examination of the blood showed the red cells to number 5,020,000, the white cells 7,200, and the hemoglobin to be 65%; the differential leucocytes count showed the lymphocytes to be 71%; the large mononuclears, 15% and the polynuclear neutrophils, 64%.

The patient died about two weeks after entrance to the hospital, the autopsy showing: The lungs to be pneumonic, the exudate in the vesicles to consist of leucocytes and desquamated epithelial cells; the heart to have a marked increase of small cell infiltration especially on the pericardial surface; the liver to be somewhat fatty, infiltrated and to be particularly infiltrated with round cells; the kidney cells to have marked cloudy swelling and the vessels to be somewhat sclerosed; the splenic vessels to be moderately thickened; and the intestinal tract, especially the colon to have a markedly degenerated and ulcerated mucosa some of which ulcers extended down to the peritoneal coat; the ulcers varied in size from that of a lead pencil to that of a ten-cent piece, and were irregular and ragged in outline.

Case No. 4. A. C., Coudersport, Pa., white American housewife; multipara; aged 25. Born in the United States. The family history was negative. The personal history related the occurrence of the usual diseases of childhood including scarlet fever, also typhoid fever and malaria. At three years of age she accidentally drank lye, since which she claims to have been unable to eat "solid meats." In 1905 at age 17, she had a vesicular eruption on the neck. Her

menstruation, beginning at age 14, always had been regular except for the last few months, there having been none for three months. She disclaimed having any venereal disease; there was no disturbance of urination. The patient had always slept well; her appetite had been excellent until recently; her diet had contained nothing unusual either as to quality or quantity. For the past four years she had taken brandy in large quantities and particularly so during the past few weeks. Her surroundings had always been fair; during the month of June 1913 the patient had been constantly out of doors lying in a hammock.

The patient was admitted to the Buffalo General Hospital on July 7th, 1913, in a morphine stupor with the statement that she had been mentally depressed for the past four weeks, and very melancholic for the past two weeks. On the day admitted she had suddenly developed an unmanageable rav- ing requiring morphine to control. She had a skin disease on both arms that first appeared about June 1st, 1913, as a drying and a cracking of the skin, followed later by a moist rawness; about the same time the tongue and lips became sore.

Upon examination July 9th, 1913, the patient kept up an incessant muttering and yet was able to answer questions; there was a marked retraction of the head with now and then an opisthotonos of several minutes; again there would be a seizure showing both tonic and clonic spasms; there were present subsultus tendinum, wrist drop, and delayed tendon reflexes. The mento-nervous condition became one of increasing apathy, dullness and stupor with coma vigil until death supervened on July 10th, 1913.

The temperature on admission was 101; the pulse, 110; the respirations, 30; the maximum blood pressure, 135. The temperature rapidly climbed to 104, the pulse to 125 and the respirations to 55 just before death. The heart was normal; the lungs showed signs of massive pneumonia so that a diagnosis of double lobar pneumonia was made. The pupils were equal and contracted but reacted to light; the conjunctival vessels were engorged. The cervical lymph glands were palpable.

The alimentary manifestations were confined to the oral cavity and were so severe as to make it difficult to open the mouth. The lips were cracked and covered with crusts; the gums showed white ulcerations at base of each tooth. The tongue was a moist red and showed many white pea-sized patches of ulceration; it could be only slightly protruded; it was markedly tremulous and had a heavy white coating. The buccal mucosa showed a general stomatitis while the

voice was a husky whisper. There were no acute gastric or intestinal symptoms or signs, nor to any of the other abdominal viscera. Along the labia minora were found many pin-head to pea-sized growths and irregular whitish spots; the vaginal mucosa was covered with small whitish spots and there was a foul purulent leucorrhea.

The skin manifestations were typically characteristic and upon them the diagnosis of acute Pellagra was made. The lesions were symmetrical, irregular areas of dermatitis, the edges of which were vermicular in conformation. The face had a tanned hue while areas of dermatitis were located on the upper eyelids at the nasal side. Upon the extensor surfaces of both forearms, upon the backs of both hands as far as the proximal phalangeal joints, upon the backs of both wrists extending around on the radial side to the midline on the flexor surfaces, in the right antecubital fossa for the size of a silver dollar and in the left for the size of a silver quarter, were the characteristic dry scaly patches of grayish to blackish color. Where desquamation had taken place the underlying color was of a violaceous red. In some of the denuded areas small hemorrhages had occurred with the formation of small hardened blood clots; while along the edges of the lesions, in areas of previous involvement and especially in those on the flexor surfaces were found deposits of brown pigment the outlines of which were gyrated, surrounding centers of lack of pigment.

In the laboratory investigations the urine otherwise negative showed the presence of traces of albumen and the presence of pus cells. The blood showed a hemoglobin content of 82% by the Sahli instrument; the red cells numbered 4,600,000, the white cells 7,800; the differential white cell count showed polynuclears 75%, small lymphocytes 10%, large lymphocytes 7%, eosinophiles 8%. The Wassermann tests of both the blood serum and the spinal fluid were negative. The spinal fluid pressure was slightly under 5 m.m. No autopsy.

Case No. 5. T. H. K., male, white American, widower, farmer, aged 77. Born in Central New York State, resided in Buffalo during the four years last past coming to Buffalo from a residence of several years in Pittsburgh, Pa.; with this exception he spent most of his life near Buffalo; he has been in Tampa, Fla. The family and personal history obtained was quite irrelevant on account of mental state of patient. Friends stated that his present mental and physical condition began in 1908 at age of 70. His facial expression grew steadily duller so that his face assumed the mask-like state seen when he came under observation. His voice

gradually had taken on a high pitched monotonous quaver often ending as an inarticulate mumbling. His mental reaction time had become so slow that he was often many seconds in replying to simple questions which if repeated caused him to become angry and to scold. He gradually had lost orientation. He slowly had become querulous, suspicious and morose while at times he was excited and delirious. He would often refuse food and remedies except whiskey. During the few days preceding admission he was more or less comatose. For the same reason it was impossible to ascertain about environment, habits or past diets, although there was nothing to indicate anything out of the ordinary for a well-to-do American. The patient entered the Buffalo General Hospital June 25th, 1914, complaining of itching and dropsy. On admission the patient's temperature by mouth was 100, and, his pulse was 120.

Examination showed the patient's lungs to be normal; the heart sounds to be weak otherwise normal. There was some ptosis of the upper eyelids; the conjunctivae were inflamed and the pupils were sluggish to light. Reflexes responded to stimuli. The mental state was one of deep apathy even of coma; he was irritable upon being aroused or examined. The teeth were poor; there was a mild stomatitis with slight salivation; the oral mucosa was of a bright-red hue. While no direct complaint of the stomach was made, there were some vague gastric symptoms; the patient had frequent fecal evacuations. The skin manifestations were very pronounced and characteristic being bilateral, symmetrical and sharply defined. They were present on the hands, in the precubital fossae, on the face, on the neck and about the genitalia. There was a dollar-sized necrotic area on the right buttock. The lesions on the backs of the hands were desquamating and showed a deep violaceous-red color; they extended from the finger tips to the wrists; the palms were unaffected, while the anterior surfaces of the wrists showed the characteristic V-shaped patches with the apex pointing toward the elbows. The areas in the bends of the elbows were diamond-shaped of a dull-red color with the acute angles pointing up and down the arm while the sharply defined edges were desquamating. The neck was involved with similar appearing patches forming the so-called collarette. The lesions on the face extended to the scalp as blotches; they were dull-red violaceous desquamating patches of chronic dermatitis which gave a mask-like expression to the face.

The urine was negative except for a marked indicanuria. The Wassermann blood test was negative. The patient did

not rally but gradually grew weaker and died about July 14th, 1914. No autopsy.

Case No. 6. Reported through the courtesy of Dr. Arthur W. Hurd, Superintendent of the Buffalo State Hospital, to whom I am indebted for the history. H. O., Polish nun, never married, aged 35. Born in Poland, emigrated to the United States in 1891 when eleven years old and settled in Buffalo; she entered the order of the Sisters of Charity in 1899 at the age of nineteen; she was transferred to a mission in Massachusetts where she lived for two and one-half years when she returned to Buffalo; a few months thereafter she was sent to a mission in Pennsylvania from which she returned to Buffalo in April 1905, where she has lived ever since. The family history indicates degeneracy; the father, a common laborer, deserted the family, the mother had manic depressive insanity and at least one sister had dementia praecox.

The personal history is silent in regard to general diseases. The patient never was very bright and she was backward in her studies; she was always thought "peculiar." In 1903, at age 21, she was sent to Providence Retreat on account of pronounced mental disturbances which so cleared in eight months that she was permitted to leave. On May 16th, 1905, she was sent to the institution as an insane person; during this incarceration depressed, melancholic periods followed others of violent excitement and led to a diagnosis of dementia praecox; she so improved that she was paroled in May 1906. She again was admitted on August 10th, 1911, and has remained an inmate ever since; her residence has been marked by fluctuations of depression and excitement in her mental state. That she also has nerve disturbances is indicated by her complaints of headaches and of pain in right arm and fingers at various times; by the wrapping up of her wrists, and by the wearing of extra clothing because of sensations of coldness. The nervo-mental symptoms seem always to have been worse during the late summer and the early fall seasons. The patient was habitually constipated; she took an abundance of food and was considered to be quite obese; corn was never an especial item in her diet; she was usually a voracious eater even gleaning from the garbage as opportunity offered. There was nothing to indicate that the early or late environment of the patient had been such as to influence the appearance of the manifestations except that she habitually and for hours so sat that her left side was exposed to the direct rays of the sun.

Late in May 1915, reddened areas resembling burns were noted upon the back of the left hand and wrist but they did

not clear up. In June 1915 a scratch-like red mark came under the left eye, which by the middle of July 1915 had spread over to the left side of the nose; later other areas appeared on the left cheek, on the left forehead at the hair line, on the left side of the chin, on the left side of the neck and on the left ear.

A Wassermann blood test made January 20th, 1915, proved to be negative.

An examination made July 16th, 1915, showed the patient to be in good flesh; that there was a slight elevation of temperature, 99.2 per rectum in the afternoon, an accelerated pulse and a normal respiration; and the urinalysis to be negative. Her mental condition was one of melancholy; she was depressed, wept easily, and refused to answer questions.

The mouth, the tongue and the pharynx presented nothing abnormal; there was no complaint about the stomach or bowels except of a chronic condition of constipation; no suggestion of diarrheal attacks was obtained.

Although the skin manifestations upon which the diagnosis of Pellagra was made were more pronounced upon the left side nevertheless they were symmetrically placed; this difference was due to the more intense exposure of the left side to the sunlight. Areas of varying size involved not only the backs of both hands from the finger tips to the wrists, but also both sides of the face and the neck; the demarcation lines were sharply defined from the normal skin; the older ones presented vesicles and crusts, and more or less thickening, scaling and desquamation; a large bleb covered the left wrist; the color of the lesions was of a violaceous hue. By October 1st, 1915, the skin manifestations had disappeared. The entire picture presented by the skin demonstrated the characteristic evolution of the dermatitis peculiar to Pellagra.

Case No. 7. M., married, male Jew, storekeeper, aged 54; born in Germany but lived in Elmira, New York, for more than the past forty years. Habits, good. Came under observation July 1st, 1915.

The family history contained nothing pertinent; the personal history was negative except that more or less continuously for a number of years back he had suffered from insomnia, weakness and vertigo, while recently he had had skin disturbances. Examination showed the tongue to be heavily coated but not typically pellagrous. The cutaneous manifestations were typical in that the backs of both hands were symmetrically involved from the tips of the fingers to their junction with the wrists; the entire area was wrinkled, thickened, rough and covered with firm adherent scales; the

color was a dirty or blackish gray. The margins of the lesions were sharply defined. The flexor aspects of the wrists showed less pronounced triangular areas with the apices on the radial side pointing toward the elbow. The body presented no other cutaneous manifestations. There never had occurred any marked or disturbing symptoms referable to the brain and nervous system or to the alimentary tract except as stated above.

In a personal report from the patient January 1st, 1918, he stated that he had fully recovered, in fact was in better health than at any time for a number of years. The treatment continued for one year consisted of the hypodermic administration of cacodylate of soda alternating with quinine. This case possessed enough of the characteristic features of Pellagra to warrant the diagnosis and its corroboration by Dr. W. A. Pusey.

Case No. 8. E. P., single, white, female, school teacher, aged 23; born of American parents in Brocton, N. Y., in which place she always lived with the exception of one year as a teacher in Easthampton, L. I. The family history was negative. The personal history recorded the usual diseases of childhood; menstruation came on at 13, and became irregular during the year 1915. In 1905, when 12 years of age and while spending a summer month at Allegheny Springs, Pa., she had an attack of diarrhea which persisted for some time after her return home; no similar attack has recurred. In the summer of 1907 she had an attack of what she called "inflammation of the stomach." In the fall of 1915 she was confined to her bed for several days with something not diagnosed but which was accompanied by "high fever." The environment of the patient had always been of the best; she always had had a generous and varied diet into which corn entered but very little as the patient did not care for it; her weight had been fairly constant but with a seasonable variation,—105 pounds in the summer to 112 pounds in the winter.

In June 1916, she sought relief from an eruption on the skin which first invaded the back of the neck and then the arms.

Upon examination July 28th, 1916, the patient was found to be under size and light weight; to present assymetries of eyes, teeth and palate and to have the general type of an hysterical individual; she gave no history of headaches or neuralgias; she was emotional, easily disturbed but showed no active depression. The tongue was enlarged on the left side and looked as though the epithelial layer had been removed; the buccal mucous membrane was red and inflamed.

The patient also complained of vomiting and of periodic attacks of diarrhea followed by constipation.

The neck was encircled by an erythematous and scaly chronic dermatitis forming a collarette. The dorsal surfaces of both hands showed a chronic, thickened erythematous dermatitis; the dermatitis did not end abruptly at the wrists but extended in large patches over the extensor surfaces of the forearms and arms; the pigmentation of the areas about the finger joints was more intense than elsewhere on the hands and the arms; the borders of the patches on the arms and forearms were well defined; the scaling varied somewhat in amount.

The blood examination demonstrated the hemoglobin to be 70% (Fleischal) the red cells 3,600,000; the white cells 10,400; the differential count to be polynuclear cells 64%, the small lymphocytes 23%, the large lymphocytes 3%, the mononuclears 5% and the eosinophiles 5%.

In August 1916, the patient was committed to a hospital for the insane on account of a sudden onset of maniacal insanity. Subsequent history unknown.

(To be continued in July issue.)

Enterococcic Infections. Tricoire, *Le Prog. Med.*, Nov. 17, 1917, describes the cultural identification. This germ, along with the *b. coli* and the *b. bifidus*, is found normally in the intestine of man and most of the domestic animals and hence, commonly, in the soil and water, and adventitiously on the skin and in various excretions. It may become pathogenic, causing entero-colitis or gastro-enteritis, especially in nurslings but may also invade the extensions of the digestive tube or may extend from it in other directions, so as to cause a great variety of lesions, as peritonitis, inflammations of the biliary passages, hepatic abscess, may accidentally invade the urethra, like the colon bacillus, may cause broncho-pneumonia, appear in the guise of rheumatism of all types, arthritic, endocardial and muscular, of meningitis, or skin affections. It may also take the form of a bacteriaemia without definite localization, and produce continued or intermittent fever. The seriousness of the infection varies greatly, being marked in the meningial type or when the lungs or joints and endocardium are involved, usually mild when the alimentary canal reacts, unless, of course, there is extension into the substance of the liver. Aside from general treatment, the production of an "abscess of fixation" or vac-cino-therapy is suggested, but apparently only on general principles.

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The Multiplicity and Confusion of Infections.

As has appeared from numerous abstracts, a number of coccidial, hyphomycetic and protozoic micro-organisms have either been discovered or recognized as pathogenic within the last decade or so. The pneumococcus has been shown to have three distinct types, not to mention the fourth group which is a sort of scrap basket for various bacteria, and the habit of bacteriologists of reporting "atypic types." Human tuberculosis has been separated into two quite distinct infections, with relatively permanent varieties, of human and bovine types. Dysentery has not only been separated into bacillar and amoebic types but at least two distinct strains of the former have been described, while it is not altogether certain that the latter is entirely due to a single kind of amoeba and even amoebae described as non-pathogenic are somewhat under suspicion. Clinical typhoid has been separated into the true infection and two comparatively common para-infections, which shade into pathogenic processes due to the colon bacillus. The gas bacillus has grown from a newly described bacterium into an organism of practical importance, recognizable to a large degree by symptomatology. Various infections, long recognized as specific, but with no knowledge as to their germ, have been claimed to be due to certain newly identified ones, some with practical certainty, as syphilis, others with more or less dispute as to the validity of the bacteriologic claims. Yellow fever has been definitely cleared up so far as the means of conveyance and identity of the carrier are concerned but the real germ remains unknown, though various claims of its discovery have been

made. Malaria has been re-classified, with a general corroboration of the validity of the old clinical classification but quotidian fever explained as double tertian infection. In fact, except for certain clinical and biologic analogies, malaria can no longer be considered as one infection but rather as several, quite as distinct as typhus and typhoid which were quite recently confused and as the venereal diseases which the 17th century physicians confused in a manner almost incomprehensible when we consider their usual accuracy in regard to gross clinical manifestations. A considerable number of animal invading organisms have been discovered quite recently, from those of small size more or less accurately answering to the ordinary definition of infections, up to macroscopic parasites whose lesions, after all, allow no sharp line to be drawn between infections and infestations.

It is a rather remarkable fact that a considerable number of well and long known diseases, of high frequency, such as the exanthemata, remain among the list of diseases of unknown cause while various infections and infestations little known in this country and Europe, and often of rather low incidence anywhere in the world, have been definitely connected with living causes.

In several instances, apparently well demonstrated germs have been discarded as the true causes of their respective diseases—those of malignant tumors, epilepsy, mumps, rheumatism, scarlet fever, etc. Perhaps the most conspicuous instance of a discarded germ is the protozoon of variola-vaccinia, whose complicated extra and intra-corporeal genealogy was figured out in detail.

One of the problems which is being seriously attacked as a part of military medicine, is the matter of sepsis, long spoken of as non-specific. We have already reached the point at which it is possible to recognize by clinical appearance, with reasonable probability, the effects of certain pyogenic organisms and, especially since the outbreak of the war and in spite of the marked tendency in certain quarters to limit all antiseptic measures to Dakin's solution or dichloramine T, the attempt is being made to reduce to practical therapeutics, the familiar bacteriologic tables that this or that antiseptic reduced one bacterium at one rate and another at another. It is not entirely a problem of research along new paths but to a considerable degree one of analyzing and making practical deductions from information already available, to separate the various pyogenic infections, to recognize their clinical features and different severities, and to select for each, the optimum method of treatment.

All this is confusing at present. We are confronted with the necessity of differential diagnosis among a far greater number of living causes of disease than formerly. The problem is not merely one of academic interest, but of practical importance. In a sense, it is merely in regard to prognosis that the practical issue arises in many infections formerly confused. But, as for the distinction between typhoid and the paratyphoids and the types of pneumococcus, the responsibility and even the therapeutic guidance of the physician is decidedly different, if we contrast the old conception that he had say 100 cases of a given disease out of which he was, so to speak, allowed to lose 10, with the new conception that he has—without attempting accuracy of numbers—70 cases of one disease, 20 of another and 10 of a third, quite distinct though presenting clinical resemblances, and that he might be satisfied with losing 10 of the first, 1 of the second and none of the third. Even though such factors as confinement to bed, diet and medication are nearly the same for all three, in general terms, the intensity of medical and nursing care appropriate for diseases of different severity is decidedly different. Moreover, the physician who is attempting to increase his efficiency, will feel that even the general acceptance of generally identical methods for three or four diseases is only a temporary matter, especially when we consider the very different methods of therapeutics already established for various diseases more or less anciently confused, and the discriminations already beginning to be made in regard to the septic infections and various other distinctions of types of disease still known by a single name. Thus, even if the bacteriologic differentiation involved merely differences in prognosis, it would still be important, for day-after-to-morrow if not for today but the differentiation already involves more important points than prognosis in some instances. This general statement means detailed problems of considerable difficulty, in regard to the interrelations of the profession, and of the relations of the laity to the different professional men involved, even economic problems, simple enough for the very rich and the very poor, but requiring serious study for the great mass of the honest and independent but by no means wealthy population.

The increased confusion of nomenclature and conception of disease is largely due to the discovery of new germs and the separation of diseases formerly considered units into types which may really be subdivisions of a unit group corresponding to varieties of a species of germs, or which may be theoretically and practically separate diseases, corresponding to entirely distinct germs which merely happen to present

analogies in their methods of parasitism. This confusion may be greatly simplified if we cut loose from all such terms as pneumonia, meningitis and the like, or else use each term in a purely locational and histologic sense or else as indicative of an infection by a given germ, without regard to where or how it invades the body. Indeed, with special reference to carriers, it may be well to ignore the question of whether it causes disease at all or merely lodges somewhere in or on the body, though, as discussed previously, there are radical differences of kind among carriers, the extremes being represented by the old fashioned physician carrying the cause of measles on his whiskers from house to house, and by Typhoid Mary. A most illuminating suggestion, partially backed by facts, has recently been made as to the rarity of meningitis meaning meningococcus meningitis, or of anterior poliomyelitis of at least putative specific nature, in epidemics. This suggestion is to the effect that there are not merely typical cases and carriers, that the disease is not merely conveyed, once in a while, by some particular route of infection such as the nares and the communicating sinuses, but that the disease actually does occur in numerous cases during an epidemic, like more familiar infections such as the exanthemata, but that it usually occurs in mild type, perhaps as an influenza—again a term of very different meanings—or a mere coryza, with occasional involvements now alone recognized, of high mortality. Such a conception is quite in keeping with the fact, itself not so well comprehended as it should be, that pneumococcic infection quite often assumes the meningeal type, with the well recognized fact that tuberculosis presents tremendous differences according to its location and the resistance of the individual, with the fact that even such a disease as gonococcus infection which is usually true to its clinical type, may occur as a septicaemia or involvement of the meninges.

To clear up the confusion, we must coin new terms or give definite meanings to old ones, to indicate 1. the gross anatomic location of an infection; 2. its histologic and functional perversions; 3. the identity of the organism. All these points must be covered in the diagnosis.

Sodoku. Felix Ramond and Levi-Bruhl, report a case, *Le Prog. Med.*, Dec. 29, 1917, and state that an observer not seeing the case till the second phase had developed, would diagnose it as trench fever. In view of the common occurrence of rat bite in the trenches, they raise the question whether the latter condition is not due to the conveyance of the suppositious specific micro-organism by this means.

BOOK REVIEWS

Books mentioned may be inspected at and ordered through this office. So far as possible, books received in any month will be reviewed in the issue of the second month following. Pamphlets, quarterly and similar periodicals, reports, transactions, etc., will, as a rule, merely be mentioned.

A Few Minutes With the Urine. By J. Henry Dowd, M. D., Genito-urinary Surgeon, Buffalo Hospital, Sisters of Charity, Mercy and Contagious Hospital, Consulting G-U Surgeon, Emergency Hospital, Lieut. (special service) and Lecturer on Insanity, Buffalo Police Department—a 40 page booklet.

In this booklet, which has been written by request, the author says, "If this booklet was for the laboratory man, or the genito-urinary specialist, more would have been written. It is intended for the general practitioner—the man who has not expensive apparatus for technical examination; has not the time did he possess them, and possibly has not a class of be honest in his opinion as far as time, knowledge and circumstances will permit." After mentioning the diseases and patients that can pay for such time given, still he wants to conditions ascertainable from a few minutes spent with the urine, he fully describes the methods of procedure in arriving at a conclusion, also giving the best treatment for the same. The urine is one of the greatest aids in diagnosis we have; Dr. Dowd has covered all the essential points in a most practical and scientific manner. A copy of this little work should be in the hands of every general practitioner of medicine; it is of inestimable value in diagnosis.

The Richardson Co., 334 Franklin Street, for whom this booklet was prepared, will send any physician a copy on request.

The Elements of the Science of Nutrition. By Graham Lusk, Ph.D., Sc.D., F.R.S., (Edin.), Professor of Physiology at Cornell Medical School, New York. Third edition. Reset. Octavo of 641 pages, illustrated. Philadelphia and London: W. B. Saunders Company, 1917. Cloth \$4.50 net.

The author has brought together an immense amount of scientific data, well arranged and presented in logical and attractive form. The first chapter, reviewing the progress of the science of nutrition down to modern times, furnishes the key to the whole book. The next chapter describes the Atwater-Rose respiration calorimeter. After discussing starva-

tion, and the regulation of temperature, about 150 pages are given to the influence of protein food, fat and carbohydrate respectively. The influence of mechanical work on metabolism is presented in a very interesting chapter which prepares the student for the consideration of "a normal diet," and the nine succeeding chapters dealing with diet and metabolism under various conditions of health and disease. The last chapter, on "food economics," is particularly valuable because of its review of the food situation in Germany as affected by the war. The needs of our own country are pointed out, and several pages are devoted to the cost of our foods compared with their nutritive value. The appendix contains the statistical tables of Atwater giving the composition of ordinary food materials. We know of no other book presenting so extensive an array of facts on nutrition in a form that can be readily utilized by the physician and dietitian.

Transactions of the Thirty-ninth Annual Meeting of the American Laryngological Association held at Atlantic City, N. J., May 28, 29 and 30th, 1917. Dr. Harmon Smith, 44 West 49th St., New York City, Secretary.

Progressive Medicine. A quarterly digest of advances, discoveries and improvements in the medical and surgical sciences. Edited by Hobart Emory Hare, M. D., Professor of Therapeutics, Materia Medica and Diagnosis in the Jefferson Medical College, Philadelphia; assisted by Leighton F. Appleman, M. D., Instructor in Therapeutics, Jefferson Medical College, Philadelphia. Vol. XXI. No. 1. March 1, 1918. \$6.00 per annum. Philadelphia, Lea & Febiger.

This quarterly installment consisting of 307 pages deals with the surgery of the head, neck and breast, and thorax. One article is devoted to infectious diseases, including acute rheumatism, croupous pneumonia, and influenza. Another article reviews the diseases of children, and the last contribution covers rhinology, laryngology and otology.

The Medical Clinics of North America. Volume 1 Number 4 (The Boston Number, January 1918). Octavo of 401 pages, 128 illustrations. Philadelphia and London: W. B. Saunders Company, 1918. Published bi-monthly. Price per year: Paper \$10.00; Cloth, \$14.00

This installment contains 18 articles, contributed by 20 authors. There is a wide range of subjects, and they are treated in a liberal style, making free use of illustrations,

diagrams and radiographs. Number 4 fulfils the expectations raised by the great success of the first three numbers of the Clinics.

A Manual of Histology. By Henry Erdmann Radasch, M.Sc., M.D., Assistant Professor of Histology and Embryology in the Jefferson Medical College. Cloth. Price \$2.50 net. Pp. 580, with 307 illustrations. Philadelphia: P. Blakiston's Son & Co., 1918.

We have here a clear and readable exposition of normal human histology, which serves a better purpose than the author's well known quiz compend and serves it acceptably. It is handy alike for the student and the practitioner; lucidly written and clearly illustrated; combining in a useful way the main outlines of embryology with the histology of tissues and organs. Frequent references to function serve at the same time to make more complete the descriptions of structure.

A Text-Book of Obstetrics. By Barton Cooke Hirst, M. D., Professor of Obstetrics in the University of Pennsylvania. Eighth edition, revised and reset. Octavo of 863 pages, with 715 illustrations, 38 of them in colors. Philadelphia and London: W. B. Saunders Company, 1918. Cloth, \$5.00 net.

During the twenty years that this book has been in the hands of the medical profession it has become justly famous for its clear exposition and excellent illustrations. The eighth edition merits the favor that has always been awarded to its predecessors. As a revision, the book is rather unique in that the author has condensed the text and omitted some unessential material in order "to present a concise statement of the best means at our command at present dealing with the numerous complications and consequences of the process of generation." The result is a volume of some 150 pages less than the seventh edition—a shortening accomplished in part by the discarding of more than one hundred illustrations. The price remains the same, however, for which favor many students will be grateful during these times of war prices. The reader who is disappointed by the slight attention given to some topics, such as "twilight sleep" for instance, may compensate himself with the assurance that nothing really essential is overlooked in this generous volume. It will easily maintain its rank as one of our most reliable

authorities. The publishers have done their part of the work handsomely and substantially.

SOCIETY MEETINGS

Brief reports and announcements of meetings of societies of Western New York, and those of general scope, are requested from Secretaries. Copy should be on hand the fifteenth of the month. Full transactions will be published at cost of composition.

The 21st Annual Meeting of the **Am. Gastro-Enterological Assn.** was held at Atlantic City May 6 and 7. Papers were read by Drs. R. Walter Mills of St. Louis; J. H. Levy of Syracuse; Martin E. Rehfuß of Phila.; Jacob Kaufmann of New York; Julius Friedenwall and Alexius McGlannan of Baltimore; Sidney K. Simon of New Orleans; W. A. Bastedo of New York; Franklin White of Boston; Oscar Klotz of Pittsburgh; G. E. Pfahler of Phila.; Thos. R. Brown, L. F. Barker, Baltimore; Ludwig Kast, J. W. Draper, Max Finhorn, New York; A. L. Benedict, Buffalo; G. W. McCaskey, Fort Wayne; John C. Hemmeter, Baltimore; Frank Smithies, Chicago; John Bryant, Boston, and Seale Harris, Birmingham.

Rochester Academy of Medicine, Meeting was held April 30. Officers from the Base Hospital at Rochester read the following papers: Immobilization of Fractures on the Field by Capt. Alexander S. Sims; The Barany Test in Army Examination by Lieut. B. G. Voorhees; The Present Status of Serum Therapy by Lieut. Albert D. Kaiser.

The Annual Meeting of the **New York Medical Society** was held in Albany, May 21st. A splendid program was given. Among the western New York State physicians who participated were: Drs. Chas. J. Hunt, Chas. W. Webb, Clifton Springs; H. U. Williams, Harry R. Trick, Ernest Watson, DeWitt H. Sherman, Irving W. Potter, F. C. Goldsborough, Lucien Howe, Carl G. Lee-Wolf, R. E. Fronczak, Buffalo; Myron B. Palmer, W. W. Brown, A. C. Snell, A. D. Kaiser, Joseph Roby, Rochester; A. A. Vander Veer, Albany; G. B. Broad, H. W. Schoeneck, J. R. Johnson, W. D. Ayer, Syracuse.

The regular meeting of the **Medical Society of the County of Erie** was held at the Buffalo Medical College Monday, April 15, at 8:30 p. m.

President George F. Cott called the meeting to order.

The Secretary read the minutes of the last regular meeting held on February 18, also the minutes of the Council held March 15, and of the Council held March 25, and also meeting of the Council held April 11. All of which were approved as read.

Dr. Bonnar, Chairman of the Board of Censors made a verbal report.

Dr. H. W. Cowper, Chairman of the Committee on Legislation briefly outlined the activities of his committee during the past two months and gave a prospective outline of some further work which his committee proposes to lay before the Society and which would require an appropriation in order to carry it out.

On motion of Dr. Lytle the report was accepted and the appropriation asked for granted.

Dr. Woodruff, Chairman of the Committee on Economics reported on the activities of his committee, and also outlined some work which his committee contemplates doing and which would require an appropriation to carry out.

Dr. F. Park Lewis moved that the sum of \$25 be appropriated for the use of the Committee on Economics. The motion was carried.

The Secretary presented a communication and resolution from the Medical Society of the County of Schenectady, relative to the Health Insurance Law. The communication was received and filed and the Secretary directed to acknowledge the receipt.

Dr. W. F. Jacobs, Chairman of the Committee on Membership, was unable to remain at the meeting and the Secretary therefore presented the applications for membership as recommended by the Committee on Membership through Dr. Jacobs, as follows:

Dr. Willis B. Harrison, 40 Krettner St., Buffalo, N. Y.

Dr. Raymond George Laport, Emergency Hospital, Buffalo, N. Y.

Dr. Clarence Kummer, 324 Myrtle Ave., Buffalo, N. Y.

Dr. Frederick W. Palmer, Interne, Buffalo General Hospital, Buffalo, N. Y.

Dr. George M. Oppermann, 2798 Delaware Ave., Kenmore, N. Y.

All of these were duly elected to membership in the Society.

President Cott then presented Dr. Lewis Fisher of the University of Pennsylvania Hospital, Philadelphia, who gave a very interesting address on "The Value of Internal Ear Tests to the General Practitioner," illustrated by lantern slides and moving pictures, also demonstrations on living subjects.

This address was followed by a lively discussion participated in by a number of physicians present. At the conclusion a vote of thanks was tendered on motion of Dr. Buswell to Dr. Fisher for his very able, interesting and instructive address.

Dr. T. H. McKee introduced the following resolution, which was unanimously adopted:

RESOLVED, That the delegates of the Medical Society of the County of Erie and the Medical Society of the State of New York, are hereby instructed to introduce a proposition and support it by every means in their power to secure an appropriation for the purpose of public propaganda under appropriate control for the purpose of educating the public to a better understanding of the value and import of animal experimentation past and present to scientific research achievement.

A collation was tendered in the College Library at the close of the meeting.

FRANKLIN GRAM, Secretary.

Buffalo Academy of Medicine, Meeting was held May 8th. Program, Section of Medicine, "The Clinical Basis for Treatment of Some Endocrinopathies" by Dr. Walter Timme, New York.

Elmira Academy of Medicine, Meeting was held May 1st. Dr. Geo. M. Case read a paper on the Relation of Nasal to Eye Disturbances and Dr. Anna Stuart one on Anaesthesia.

Rochester Academy of Medicine—Meeting May 8. Program—"Etiology of Acute and Chronic Nephritis" by Dr. Alvah S. Miller. "The Value of Recent Laboratory Tests in Diagnosis and Treatment of Nephritis" by Dr. C. Clyde Sutter.

The Niagara District Medical Assn. met at St. Catharines, Ont., Apr. 30, and elected officers as follows: Pres. Dr. Colbeck of Welland; V. P. Dr. Duggan of St. David's; Sec.-Treas. Dr. Cowper, Welland.

The American Gastroenterologic Assn. held its 21st annual meeting at Atlantic City, May 7 and 8.

Buffalo Academy of Medicine, Section of Obstetrics and Gynecology, May 15th. Program: Symposium: Tumors of the Ovaries by Dr. James E. King; Pathology by Dr. Chas. A. Bentz.

TOPICS OF PUBLIC INTEREST

State Board Examinations, 1917. 2605 graduates of 1917 and 4253 altogether, were examined. 96 colleges were represented. The failures were 7% for Class A colleges; 18.4% for B; 35.4% for C; 41.7% for foreign schools; 46.8% for undergraduates. 27-37 states refuse to examine graduates of the various Class C colleges. The maximum number of licenses was granted in 1906, the minimum in 1917—7865 and 4061 respectively. 38 states require 1 year of collegiate study, 30 two or more.

The National Board of Medical Examiners is recognized by Col., Del., Idaho, Ky., Md., N. H., N. C., N. D., Pa., R. I., Vt.

Retired Medical Officers of the Army, Navy and Public Health Service, are licensed without examination by Ala., Cal., Col., Ill., N. D., Va., Wis., and Porto Rico. (Note: It is none too early to consider the needs both of the civil population and of the medical profession after the war. Every man who has made good in the military and cognate services during the war is competent to practice his profession anywhere, quite aside from the natural tendency to reward his patriotism. This statement is purposely made in broad terms to include not only the medical but any other profession for which license is required or may be required by states. The medical profession, being the one mainly interested, should take action to secure legislation on this point.)

An Imperative Appeal for Medical Officers. An urgent and imperative appeal has just been issued by the Surgeon General of the United States Army, for doctors for the medical Reserve Corps.

There are today, 15,174 officers of the Medical Reserve Corps on active duty and the Medical Department has reached the limit of medical officers at the present time available for assignment. With these facts before the medical profession of this country, we believe that every doctor who is physically qualified for service between the age of 21 and 55 years, will come forward now and apply for a commission in the Medical Reserve Corps.

Drafts of men will continually follow drafts, each of which will require its proportionate number of medical officers and there are at this time on the available list of the Medical Reserve Corps, an insufficient number to meet the demands of these drafts.

The Fifth Health Center for Buffalo has been opened at Court and Franklin Sts. This dispensary is intended to serve the down-town section, including the water front, and is at the free disposal of persons living in that section who are without funds. Dr. Chas. Leone, a city physician, is in charge. Clinics will be held there regularly.

Standard Names and Terms proposed to be employed in military surgical work. The Medical Section of the Council of Defense is working to this end.

Parcel-Post Mail and fourth class mail sent to the U. S. Expeditionary Forces abroad or U. S. naval vessels need have no internal-revenue stamp affixed.

Bureau of War-Risk Insurance of the Treasury Department announces that in the six months since Oct. 6, 1917, 14 billions of insurance has been written. This was taken by approximately 1,700,000 soldiers, sailors and nurses. The average amount applied for was close to \$8,500, the minimum permitted by the law being \$1,000 and the maximum \$10,000.

The Minn. State Pharmaceutical Assn., at its annual convention and the Phila. Drug Exchange have gone on record in favor of requesting the Committees of Revision of the U. S. P. and N. F. to consider substitute formulas as a preparedness measure for the duration of the war.

The Surg.-General authorizes the following statement: 113 sick and wounded soldiers returned from the Am. Expeditionary Forces, were landed in the U. S. during the week ending April 26.

Mrs. Charlotte Davenport, who is 95 years old, is touring the country lecturing on the behalf of physical culture to the children in the schools. She has five sons and eighteen grand-sons in the French Army.

The National War Work Council of the Y. M. C. A. announces that the average American soldier in France does not spend more than 20 cents a day. That this modest sum covers pay for toilet articles, tobacco and sweets. That the men are all saving money and investing it in Liberty Bonds, War Saving Stamps and sending it home to their people.

Some Paradoxes of the War. It was prophecied that the development of long range, accurate aim and rapid fire,

would necessitate action at long distance. No war has been fought with such small average distance between combatants. The conditions of trench warfare and the impossibility of burying the dead and of applying sanitary methods would theoretically produce so great disease incidence that military casualties would sink into insignificance. On the contrary, all of the armies of medically enlightened nations not only claim death rates from disease far below those formerly prevalent but even below those of the same age and sex group in conditions of peace. It was expected that high velocity missiles from small arms would produce comparatively insignificant wounds unless a vital spot were directly hit. On the contrary, these wounds have proved especially destructive. But, again, the actual recoveries, especially the return of 80-90% of the wounded to military service, is unprecedentedly high. Trench warfare should theoretically cause the majority of wounds to involve the head and upper extremity. Actually, leg injuries are 2-3 times as frequent as those of the arms and injuries below the waist 7 times as frequent as those above. The non-combatant troops of the medical department have the highest mortality and aviation officers are said to have the lowest relative mortality of all officers.

Military Road. N. Y. State has appropriated a million dollars to improve missing links between N. Y. City and Albany, Buffalo and the Pennsylvania line and to keep the road in good condition for war traffic. It may be remembered that we advocated this policy two years ago, long before the emergency occurred.

The Medical Reserve Corps. The recent German drive has hurried the transportation of troops to Europe and the army actually raised and in service, here or abroad, requires just about the number of medical men who have volunteered, there being a comparatively few who have accepted commissions and who have not been called to service. The Surgeon General's office is too much engaged with more practical duties to furnish either a list or statistics of the volunteers from this or any other section of the country, although we would be glad to publish such information. But it is immaterial whether Buffalo and western N. Y. have furnished more or less than their proportionate number. Such sacrifice to the country's needs, like Liberty loan allotments can be determined only approximately on the basis of population. So far as can be determined by inquiry, our territory has done its share on a mathematic basis. On the other hand,

the opinion is generally expressed that this region has not been depleted of physicians to the degree either of suffering on the part of the laity or undue prosperity of the members of the profession left. The moral is plain, especially as some cities, especially in the south, are reported to have reached this condition. The age limits are 22-55, the pay liberal for young men, adequate for older men who have been successful and who have presumably been able to provide for their families. In plain terms of money, a reserve officer gets \$2,000-3,000 according to the three ranks conferred, plus some perquisites which are liable to be restored to those pertaining in peace for the regular army or even increased beyond this point and thus equivalent to salaries 10% higher, with another 10% for foreign service automatically. He can get along comfortably on \$1,000-1,200 for himself. Generally speaking, so far as can be determined by observation of groups of medical officers at training camps or in active duty, they are about equally divided into the three age groups 22-35, 35-45 and from 45 upward. Except that the reduction of graduates in the last ten years has left the medical profession top-heavy in age as compared with the population generally or any vocation or other group subject to a steady process of dying off at the top and growth at the bottom, this means an enormously greater proportionate volunteering of the older men. To allay the apprehensions of those patriotically inclined it may be said that, as a rule, the older men are perfectly able to withstand the physical strain and to adapt themselves to altered conditions of life and habit, especially to conform to discipline. The older one is, the more does varied experience count rather than actual length of life, even if that showed any tendency to being shortened by military service, the less does he have to think of his financial future, the more does he need a complete change, the less he has to sacrifice. Forget statistics and ultimate selfish considerations and decide the matter solely according to whether you can or cannot leave your private life.

Chicago's Municipal Garbage Reduction Plant. The grease and other material conserved was sold for \$3,575 in Feb. and \$6,236 in Mch. Buffalo has a most interesting plant of this kind which, we understand pays even greater actual amounts.

Housing Capacity of Buffalo. A recent census by the Health Dept. gives a total of 64,625 living places, divided as follows: 1-family houses 33,175; 2-family 25,847; tenement houses 4,309; rooming houses 1,075; lodging houses 50; board-

ing houses 94; hotels 76. Counting tenements as averaging 6 families, rooming, lodging and boarding houses as averaging 2 families and considering that hotels are for transients, this really means 113,161 dwelling units and corresponds quite closely to the accepted average of a trifle less than 5 persons to a family.

Foreign Born Population of American Cities. By different methods of calculation, we have estimated that the population of the U. S. is 45-55% foreign, in the sense of having reached this country since 1820, and, owing to the comparatively small immigration for the latter part of the colonial period and the beginning of the national period, the percentage would be only slightly larger if 1700 were taken as the dividing line. The south is more largely originally American than the north and the country districts than cities. Some have estimated that the population of few northern cities of large size is more than 10% colonial American. The percentages of literally foreign-born (German-born following), is stated as follows: St. Louis 18%, 6.95%; Detroit, 33%, 9.59%; Cleveland, 34%, 7.38%; Boston, 35%, —; Chicago, 35%, 8.34%; Bridgeport, 36%, —; New York, 41%, —; Cincinnati, —, 7.81%; Buffalo, —, 10.34%; Milwaukee, —, 17.33%.

Commutation of Quarters for Officers. In peace, officers are allowed quarters beginning with two rooms for a second lieutenant and increasing one room for each advanced grade. If quarters are not available commutation is allowed at the rate of S. QW. per room. In war, officers below the rank of major are allowed half a tent, majors a whole tent, or a small room in barracks of some sort in most of the present cantonments. A recent bill, signed by the president, restores the commutation allowance for officers actually having families for which they are providing quarters, in addition to an allowance for heat and light according to season. Just how the latter will be arranged, has not yet been announced but it will probably be in accordance with army regulations. This means for the Medical Reserve, that 1st lieutenants will have an addition to their pay of \$36, captains \$48, and majors \$60 a month, which makes the service still more attractive.

Telephone Rates. For several years, the Bell Companies have been arguing as to the uneconomic features of dual systems. Having, in most places succeeded in killing competition, they now propose to raise the rates to something like the higher prices prevailing before the uneconomic dual

system sprung up. There is only one answer to this sort of logic, strict government control and it has already been seriously suggested that both telegraph and telephone systems should be made part of the postal system as in most foreign countries. The postal service, having been originally and constitutionally reserved as a function of the federal government, methods of transmitting messages not discovered at the time, are legitimately included with written messages. If this were denied, it would be just as proper to hold that while letters written with a pen were mail matter, those written on a typewriter are not. Government control of telegraphs and telephones has worked well in most foreign countries, the rates being with few exceptions much lower than in the U. S. the exceptions being due to the use of the government monopoly as a substitute for other means of raising state funds.

German Statistics. It is of some interest to consider some of the recent statistics. Gen. Schultze, for example, has recently stated to the Reichstag that 629,000 men had been discharged for disability and that 750,000 sick and wounded had been returned to the service. It is usually considered that the wear and tear of an army, aside from military casualties is about equal to the increments from each annual class—i.e. about 1% of the population per annum. That is to say, Germany would lose about 700,000 men from her army each year simply from aging and general physical infirmity and would gain as many from the rising generation. The sickness and disability of our own army in this country, according to weekly reports, corresponds approximately to the incapacity of every man for some period, though there has been no terrible epidemic and the health has been good on the whole. Of course, such a statement includes venereal disease incidence, many minor complaints and really means that every thousand men yield only a trifle over a thousand days' incapacity for duty. Germany has definitely claimed that 90% of the wounded were returned to duty and the average proportion of recoveries should hold good for sickness. A few diseases, it is true, have very high mortality rates and those comparable with pneumonia and typhoid have mortality rates of somewhere between 20 and 10%, but diseases of such severity or greater, are comparatively rare while many, such as the exanthemata have quite low mortality and permanent disability rates. We can, therefore, scarcely reconcile the statement that the sick and wounded returned to the army are only about a fifth greater than the discharges to civil life. Cripples are stated in different places

as numbering 70,000 discharged from service and 98,000 reckoned with altogether. Elsewhere, the total losses for the war are given as 2,000,000. If this statement means the dead, or even the dead plus 644,104 elsewhere admitted as captured (about 512,000) and missing (132,000), the number is out of proportion to any conceivable ratio of killed to total wounded, or to the number of cripples given. And, if the 2,000,000 means total definitive losses, it does not check up with the few rather doubtful numbers that may be taken as known quantities in an equation. In short, we cannot make the various figures harmonize with any previous experience in military losses of various kinds. Other statistics, partly based on English compilations of German official publications of casualties, partly on number and known size of divisions engaged on various fronts, partly on prisoners known to be in the various entente ally countries, partly on the balance of casualties between opponents, agree quite accurately on a system of cross checking, that the definitive German losses up to the end of $3\frac{1}{2}$ years of war were $3\frac{1}{2}$ million, with an estimate that the recent six weeks' heavy fighting has resulted in a total of about $\frac{1}{2}$ million more, half of which would be returned to service after recovery from wounds. Generally speaking, the total definitive losses will be just about double the actual fatalities. We have previously alluded to the military axiom that a country cannot maintain more than 10% of its population in actual military service and that it cannot make good during an active and comparatively short war for losses beyond the non-military wear and tear, although it may temporarily withdraw men from industries, or draw on the feeble, aged or immature. The conclusion seems to be justified that Germany is down to about $3\frac{1}{2}$ million men, including the ultimate returns to duty from the recent casualty list. Measurement of any conceivable western front shows that comparatively few reserves are available at an allowance of 5,000 men per mile, even if no account is taken of the needs on an eastern front or reinforcement of the Austro-Italian front. It is also obvious that when the man-power has been reduced to the minimum necessary to hold a given front, temporary disabilities count as powerfully as definitive, more so if we consider the man-power required to take care of the wounded. We prefer, however, to leave prophecies of duration of the war to others, taking these premises for what they are worth and with due allowance for errors in data.

43 Women Physicians have been sent into foreign medical service by the American Red Cross. They have been sent as

individuals not as a unit. Dr. Regina Flood Keyes of Buffalo, Dr. Frances M. Flood of Elmira and Dr. Esther Parker of Ithaca are among the list.

New Postage Stamp for letters via Aeroplane is red, white and blue, showing an aeroplane and the denomination 24 cents.

Mrs. Hanna G. Leslie of Jamestown died April 8, age 100 years and 3 months.

Right of French Soldier to Refuse Operation. We have previously noted that the right of the American soldier in peace to refuse a major operation involving general anaesthesia of appreciable risk of death has been suspended during the war. Considering that the healthy soldier is compelled, in war, to incur a very appreciable risk of death, it is held that a board of surgeons may compel submission to any operation that will with reasonable probability, restore a disabled soldier to duty. This is entirely proper and we are somewhat surprised to note that a recent decision of the French Minister of War holds that a wounded soldier may refuse operation but that such refusal may be officially used to reduce future pensions to the basis of the probable net disability in case operation had been done. A recruit may also refuse an operation to remove disability existing before his mobilization.

The Cartilage Co. was Indicted for Fraudulent use of the mails and trial was begun before Judge Hazel in Buffalo, April 15. The testimony of expert witnesses as to the possibility of increasing stature by a stretching process was contradictory, one of the strongest points for the defense being a letter from Dr. Wm. L. Anderson, head of the Yale Physical Dept., to K. Leo Mingis, one of the defendants, to the effect that the latter might be on the right track. The case went to the jury May 3 and a disagreement was reported May 4.

Schick Test in Diphtheria. The existence of a considerable degree of hereditary immunity is a fact often overlooked. About 80% of the newborn give negative Schick reaction; at the age of 5, the proportion is reduced to about 50% while 80-90% of adults react negatively. Remembering that a negative Schick test means actual immunity, it will be seen that these percentages correspond well with the incidence of the disease at different ages.

Anthrax was reported early in May near Corning, two cows having died on the farm of Seldon Gridley of Caton. The rest of the herd was vaccinated.

CORRESPONDENCE

This department is intended for the presentation of news and views not coming within the scope of other departments, and particularly to afford opportunity for discussion and criticism of views elsewhere expressed.

To the Editor of the Buffalo Medical Journal:

Careful investigation of the status of a Christian Science of Grace M. Trankla, notice of whose suit against Clarence C. Burger to recover pay for services as a practitioner was published in your March number, discloses that she is not known as a member or regular attendant of the local Churches, that she is not a member of The Mother Church in Boston, nor on the list of authorized practitioners. The methods indicated in the complaint are not in accordance with the custom and practice of the true followers of this teaching; in short they are positive proof that she is not a Christian Scientist.

In regard to remuneration for services, authorized practitioners on Christian Science are guided by the By-law in the Manual on The Mother Church, by Mary Baker Eddy, which says, "A member of The Mother Church shall not, under pardonable circumstances, sue his patient for recovery of payment for said member's practice, on penalty of discipline and liability to have his name removed from membership. . . . A Christian Scientist is a humanitarian; he is benevolent, forgiving, long-suffering, and seeks to overcome evil with good." (Article VIII, Section 22.)

Very truly yours,

ALBERT R. GILMORE,

Committee on Publication.

1. Attention of medical officers is directed to the provisions of paragraph 423, M. M. D.—"Medical Officers will not publish professional papers requiring reference to official records or to experience gained in the discharge of their duties without the previous authority of the Surgeon General."

2. Numerous scientific papers written by officers of the medical department have recently appeared in the medical press without specific authority from this office. This practice will be discontinued, and the above regulation will be strictly complied with.

3. Officers desiring publication of professional papers will

submit two copies to the Surgeon General with request for permission to publish same. Upon approval, a copy will be forwarded to the journal designated by the officer for publication.

By direction of the Surgeon General:

C. L. FURBUSH,
Lieutenant Colonel,
Medical Corps, N. A.

PERSONAL

Announcement of removal, travel, and other matters of interest are requested. Please report errors in the listing of any physician in the State and other directories, that we may co-operate with the State Society in securing a correct list.

Dr. Grover Wende of Buffalo is seriously ill with pneumonia. He is now reported to be out of danger.

The Erograph which Dr. Lucien Howe of Buffalo has devised and described for the measurement of fatigue of convergents and accommodations is now being used in the Research Laboratory at Mineola, L. I. Dr. Howe is frequently in Mineola in charge of the use of this instrument.

Dr. Charles Stockton and Dr. Allen Jones attended the convention of the Gastro-Enterologist Society at Atlantic City May 7-8.

Dr. W. H. Bergtold of Denver, a former Buffalonian who graduated at the U. of B. in 1886, has recently published a book on the incubation period of birds. In 1889, he published the first bird list of Erie Co.

Dr. Arthur W. Hurd has resigned as Supt. of the Buffalo State Hospital, a position which he has held for the past 27 years. He will make his future home in California.

Anthony Tall, formerly Supt. of Mt. Sinai Hospital, Cleveland, has been appointed Supt. of the Buffalo Homoeopathic Hospital, in place of Miss Coleman who has resigned.

Dr. Elliott I. Doran of Otisville, has been offered the appointment of Supt. of the new Steuben Co. Tuberculosis Hospital that will soon be opened at Bath.

Dr. Edwin A. Bowerman announces the removal of his office and residence to 375 Linwood Ave., near Utica St.

MILITARY PERSONALS

To Fort Oglethorpe, Ga., Lieuts. Lee M. Sachs, Haworth R. Traver, Buffalo; Anthony Bondi, Harold L. St. John, Rochester; George M. Opperman, Michael J. McMahan, Frank N. Potts, Chas. Simon, Buffalo; Floyd H. Jones, Elmira;

Salavator C. Loiacono, Buffalo; W. W. Millas, Rome; Robert C. Scott, Syracuse; Frank H. Snyder, Geneva; Capts. Wallace Aubry, Cohoes; Emerson W. Ayars, Alfred.

To Port McHenry, Md., Lieuts. Brooks W. McCuen, Syracuse; H. W. Johnson, Gowanda.

To New Orleans, La., Lieut. Frank E. Fox, Fulton.

To New York City, Lieuts. Frank C. Walz, Buffalo; James F. Munson, Sonyea.

To Philadelphia, Pa., Lieuts. Clarence B. Gould, Batavia; J. Y. Cohen, Buffalo.

To Rockefeller Institute, Lieuts. James C. Sullivan, Buffalo; Ralph F. Gregerious, Corning; Joseph A. Newicki, Buffalo; Brewster C. Deust, Syracuse.

Honorably discharged for physical disability, Lieuts. Ward W. Millias, Rome; W. E. Barren, Addison.

Letter directing Lieut. Harold E. Shaver, Sherman, N. Y., to Hoboken, revoked.

To Camp A. A. Humphreys, Accotink, Va., Major Arthur S. Moore, Middletown.

To Camp Gordon, Lieuts. Frank Kruse, Chas. C. Panzarella, Buffalo; Henry M. Spofford, Batavia; P. H. Buckley, Buffalo.

To Camp McClellan, Lieuts. Walter L. Weeden, Chas. J. Hunt, Clifton Springs.

To Camp Wadsworth, Lieut. Lee A. Hadley, Syracuse.

To Fort Benjamin Harrison, Capt. Chas. H. Erway, Elmira.

To Hoboken, N. J., Lieut. Harold E. Shaver, Sherman; Capt. John R. Bradley, Rochester.

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To Camp Greene, Capt. R. B. Bontecou, Ithaca.

To Fort McDowell, Capt. Kent E. Williams, Rome.

To Mineola, L. I., Lieut. W. B. White, Jamestown.

To Army Med. School, Lieuts. D. A. MacDuffie, Olean; R. E. Elliott, Rochester.

To Camp Dodge, Capt. Kent E. Williams, Rome.

To Camp Hancock, Lieut. W. E. Diefenbach, Nunda.

Dr. William Stanton received the commission of Captain last June. He writes that in April he was made a Major. He is stationed at Fort Slocum, N. Y., where, since the first of Dec. he has examined personally the nose, ears

and throat of over 27,000 men. He has a son serving with the Marines in France and one serving as a cadet in the Aviation Corps.

To Boston, Mass., Lieut. Herbert I. Kallet, Syracuse.

To Camp Colt, Gettysburg, Pa., Lieuts. Frank A. Walder, Lockport; Brooks W. McCuen, Syracuse.

To Camp Grant, Lieut. Norman L. Sheehe, Dunkirk.

To Camp Upton, Lieuts. Adelbert C. Abbott, Syracuse; Ira W. Livermore, Gowanda.

Health Commissioner Fronczak of Buffalo has been drafted by the government for service in the medical corps of the national army. He has been commissioned a Major. Dr. Franklin Gram will serve as Commissioner during Dr. Fronczak's absence from town.

Dr. Frank Talbot of Niagara Falls has been promoted from Lieut.-Surg. of the U. S. Med. Corps. He is now stationed at Camp Devens, Ayer, Mass.

Dr. Harry Maldiner of N. Tonawanda, a Lieut. with the medical staff of the American forces in France writes that his Christmas packages came late in March and were in good condition.

Dr. David Stoddard Dooman and Dr. Eucarpio Pisani of Buffalo have received commissions as lieutenants in the M. R. C.

OBITUARY

Readers are requested to report promptly the death of all physicians in Western New York, or former residents of this region, or graduates of any medical school in Western New York, and to notify the families of the deceased of our desire to publish adequate Obituary notices.

Dr. John F. Cleveland of Le Roy died April 15. He graduated from the Bellevue Hospital in New York in 1865.

Dr. Charles Glidden of Dansville died suddenly March 24th. He was a member of the medical staff of the Jackson Health Resort until the government rented the institution for a base hospital. At the time of his death he was in charge of the patients of this sanitarium as they had been removed to the Frederick Noyes home in the village while the Avon Inn at Avon, N. Y., is being repaired for their occupancy.

Dr. E. P. Griswold of Niagara Falls died April 1st, age 63. He graduated from the New York University in 1878.

Dr. Edward M. Moore of Rochester died April 5, age 67. He was graduated from the University of Buffalo in 1874.

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EDITOR AND PUBLISHER:

A. L. BENEDICT, A. M., M. D., 228 Summer Street, Buffalo, N. Y.

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BUFFALO MEDICAL JOURNAL

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Number 12

ORIGINAL ARTICLES

The right is reserved to decline papers not dealing with practical medical and surgical subjects, and such as might offend or fail to interest readers. Contributors are solely responsible for opinions, methods of expression and revision of proof.

Pellagra as it Occurs in Buffalo and Vicinity

By GROVER W. WENDE, M. D., Buffalo, N. Y.

(Continued from June issue.)

Case No. 9. B., Scotch Canadian housewife; married 15 years, a multipara, aged 39. Born in Merritton, Ontario, Can., where she had always lived. The family history was negative other than that the mother died at 55 from cancer. The personal history showed the patient to have had whooping cough; she was otherwise well and healthy until 1913. Menses, always irregular, appeared during the fourteenth year. She was operated in 1913 for "tumors" since which time she had lost twenty-three pounds in weight. Her digestion always had been fair and she never had suffered from diarrhea. In general she had always felt stronger in winter than in summer. A skin eruption had appeared on the backs of the hands shortly before her operation in 1913, which eruption lasted about three weeks. The patient's environment always had been excellent; she had travelled but little and then never far. She always had been well-fed; corn had entered into her diet only in very moderate amounts. She never had used alcohol; her habits had been excellent.

On August 26th, 1916, the patient sought relief for a skin eruption that came on about the first of August 1916.

Upon examination the nervous system as well as the mental state presented nothing abnormal. The oral, vaginal and rectal mucous membranes were exceedingly red; she complained of abdominal pain; she also gave a history of periodical attacks of diarrhea which often obliged her to go to bed for a short time.

The backs of her hands presented a brownish-red, rough and desquamating chronic dermatitis. A conspicuous and highly characteristic feature was the termination of the inflammation in a well-defined margin upon the wrists, producing the so-called "pellagrous glove." There was no other skin involvement when the patient came under observation.

Examination of the blood showed the hemoglobin to be 77 per cent; the red cells 4,100,000; the white cells 9,600; the leucocyte differential count to be polynuclears 60%; small lymphocytes 24%, large lymphocytes 8%, mononuclears 6% and eosinophiles 2%.

Her physician two months later, October 1916, reported her death; he stated that upon her return home she was confined to her bed; gradually grew weaker; developed a diarrhea with as many as 10 to 20 stools a day. He specially emphasized the dullness and apathy of her mind, and the peculiar expressionless appearance of her face.

Case No. 10. Reported through the courtesy of Dr. Arthur W. Hurd, Superintendent of the Buffalo State Hospital, to whom I am indebted for this history. M. V. S., single white, female American school teacher, aged 63. Born in the State of New Jersey; she had resided in Buffalo upwards of 40 years, graduated from the Buffalo Normal School and subsequently taught in the public schools; she was only absent from Buffalo upon vacation trips.

Family history was negative. Personal history shows that the patient had had no serious illness. Her environment had always been excellent and her habits had been good; she did not use alcohol in any form. Her diet was varied and plentiful with no mention of corn as a special item. Up to 1906 at age of 50, she was extremely particular about her person, her dress and her food, but subsequent to this date it was noted that a gradual change began until she finally preferred, relished and ate heartily of food that was more or less spoiled and which her friends described as "not fit for a dog to eat;" and, until she became careless as to her person and her dress. About this time, 1906, she began to complain of intractable "stomach, bowel, kidney and liver trouble," for which she took much medicine; she also gradually became dependent, self-centered, suspicious, mistrustful and unbelieving. She was constantly seeking relief from her ill-defined disease by frequent changes of doctors, by short periods in sanitariums where she complained that needles were put in her arms and chloroform sprinkled about; these complaints indicate neuralgias. Friends had noticed that the patient's face and particularly her hands had taken on a

grimy appearance as if unwashed. The patient was committed to the hospital as an insane person August 28th, 1916, and died February 28th, 1917.

On admission she complained that chloroform was being put on her at night to make her sick and that something was put in the enemas to make her constipated, and that she could not eat for she felt there was no room in her stomach for food and that she felt tired and overworked and did not sleep well.

Examination of the lungs and the heart was negative; the blood pressure gave a systolic reading of 150 m.m., and a diastolic of 100 m.m.; there was no palpable arterio-sclerosis nor lymph nodes. Teeth were unclean and in poor condition; the tongue was coated; the mucous membranes were of good color. The thyroid was not enlarged; there were no tremors nor twitchings. The reflexes were normal. The eyes were normal. The complexion was dark, the skin and subcutaneous tissue showing senile changes. The urine was negative except for a few hyaline casts. The Wassermann blood serum test was negative. The temperature, respiration and pulse were normal.

Following admission the patient became depressed, anxious, worried, contrary, stubborn, resistive, disagreeable and sloven. She did not want to eat; she had to be spoon-fed; she complained that her mouth was full and her stomach and bowels closed. She constantly worried about her bowels and picked at her anus; in December 1916, a diarrhea developed, the stools being very offensive.

In December 1916 although a grimy condition previously had been noted, the backs of the hands became a dark cherry red; on each wrist was an irregular inflamed patch rough and reddish-brown in color; the patches gradually extended down the hand and fingers and up the forearm; they became considerably pigmented and scaly; desquamation occurred between the fingers with the production of raw areas discharging a serous fluid. An unusual skin manifestation was the involvement of the palms which presented a thickened, indurated, darkened, fissured and scaly appearance; patches appeared on the buttocks, on the inner sides of the thighs near the knees and on the dorsal portions of the feet. Another unusual manifestation was the involvement of the soles of the feet in a manner similar to the hands. Later the dermatitis attacked the whole of the right ear and the neck; the involved areas became pigmented, scaly and violaceous in color. The skin of the chin and lips became coarse, rough and grimy with the pores much dilated. The facial expression was one impossible to describe, unlike any noted in con-

nfection with other diseases causing suffering and distress. The skin of the entire face was involved, in a spotted appearance. All the involved areas showed evidences of certain changes which indicated that they were repeatedly subjected to an active inflammation; they had assumed different color schemes in different locations; the manifestations of the dermatitis on the different parts of the body varied from time to time.

About 48 hours preceding death the patient developed sudden weakness, labored breathing with a temperature of 106, respirations 40 and pulse 140. The temperature was 95 some hours before death took place.

Autopsy showed the skin conditions as just described. There was thickening and opacity of the intracranial blood vessel trunks; there was no atheroma of the aorta. In the intestines the mucous membrane of the ileum showed several congested dime to half-dollar sized areas, and some patches of atrophy, while that of the colon showed a rather diffuse dark red coloration. The liver showed marked passive congestion. The retro-peritoneal lymph glands were somewhat enlarged. Otherwise the gross appearance was negative.

The microscopical examination of the tissues of the heart showed moderate pigmentation of muscle fibres and slight coronary sclerosis. There was very slight fat infiltration of the liver with some necrosis, and a deposit of pigment around the central vein. The kidneys showed marked chronic parenchymatous nephritis with moderately severe arteriosclerosis. The adrenals had patches of intense congestion. The intestines showed superficial ulceration and patches of hypertrophy of lymphoid and endothelial elements resembling the lesions of typhoid.

In the medulla there were a few blackened fibres (by Marchi) in the pyramids. The medulla and cord R. P. C. L. (by Alzheimer-Mann method) showed a few fibres having early degenerative changes. There was no evidence of tract degeneration in the medulla or cord. There were no senile plaques but much disintegration of intra-cellular neuro-fibres, especially of the Betz cells.

Left frontal 1. (haematoxylin and eosin). The pia showed only slight if any thickening but the vessels were sclerosed with hypertrophied media; the smaller vessels showed hyalin degeneration. The pia contained dark brown striates and masses of pigment free in its meshes and some in the cytoplasm of the Gitter cells; in some places there were large branching fibroblasts, completely filled with pigment and staining a very dark green with toluidin blue.

The cortex showed a few corpora amylacea in the superficial layer and there was capillary fibrosis.

There was no infiltration of the pia or cortex. There was a moderate satellitosis of the nerve cells especially of the deeper layer; the pyramids were dark and somewhat cloudy.

Left paracentral lobe—Pin-like left frontal 1, perhaps less pigmented. In the cortex was found an enormous number of corpora amylacea in the upper layer. There was very marked satellitosis. There was axonal alteration on left paracentral lobe and right paracentral lobe. For the most part the Betz cells did not contain a great amount of pigment.

Right paracentral lobe (Marchi). A few blackened fibres in the marrow. Lipoid substance in nerve cells and in perivascular spaces and in vessel walls less intensely black. Some similar granules in superficial cortical layers in connection with glia cells and in pia.

Case No. 11. W. V. A., male, half-breed Indian; aged 59, born in New York State; lived in Salamanca, N. Y. He came under observation February 1st, 1917. He had had skin manifestations since December 1916. He had had no mental or nervous symptoms. On examination the mouth and pharynx showed a typical erythema. There was no complaint of the abdominal organs although there had been marked distention for a year. The Wassermann blood test registered four plus. A persistent subacute dermatitis typically pellagrous occupied areas on the face, the neck, the arms and the hands while lesions were present upon other parts of the body. When last heard from the patient had steadily lost weight and still had the skin manifestations.

Case No. 12. R. L., white American housewife; aged 40; born in Liberty, Pa., and lived in Buffalo except for occasional short excursions.

The family history contained the fact that the husband had spinal syphilis otherwise it was negative. The personal history showed patient had had typhoid at 12 years; also pneumonia and the usual children's diseases; she aborted her first pregnancy. During 1916 she had a poor appetite; also loose frequent bowel movements following previous chronic constipation; her sleep was much disturbed; her menstruation quite irregular. Her habits were good; she took no tea, coffee or alcohol. Her diet during the summer season contained much green corn. As she lived most of her life on a farm her environment was good.

The patient entered the Buffalo General Hospital March 28th, 1917, complaining of diarrhea, vomiting, loss of weight and of strength, epigastric pain, burning in the mouth and

soreness of the gums and the tongue. She dated the beginning of her disturbances from September 1916 when she was suddenly prostrated which attack was accompanied by nausea, vomiting and diarrhea. The diarrhea had persisted to the extent of from five to fifteen fluid, mucous-like stools daily; she had vomited at least once a day always preceded by gastric pain and nausea. These symptoms were accompanied by a persistent burning pain in tongue, mouth and stomach. At about the same time (September 1916) patches of pigmentation of the skin appeared on the wrists, elbows and face; at first of a bright-red hue these areas became darker from the deposit of pigment and at times were covered with scales.

Examination on admission demonstrated general emaciation and weakness; the lungs, heart, abdomen and pelvis, the nose, eyes, ears and teeth, presented nothing abnormal that would explain the condition of the patient.

In the mouth and pharynx the entire mucosa was found to be of a bright-red color, the gums showed slight ulceration and the tongue was also rough and sore; there was slight palpatory tenderness over the epigastrium. The rectal and colonic mucosa was markedly red and congested; the blood vessels of which were injected while areas of erosion were found above the rectal valves, and the colon contained considerable fluid. The mental state was one of sluggish activity and fear of imposing catastrophe. The expression was dull and mask-like as though the patient had forgotten how to smile. The skin manifestations from which a positive diagnosis was made, were a sharply defined dollar-size patch of desquamating violaceous red hued dermatitis in each precubital space. Upon subsequently exposing the patient to the direct rays of the sun for a few days, there developed a chronic red colored dermatitis covering the face and the backs of the forearms and hands that varied in intensity and extent from time to time.

The temperature range on the day of admission was 100 to 102; it kept at about these degrees during the three months that the patient lived in the hospital being as high as 104 in the mouth and 106 in the rectum two weeks before death, but it was normal (98 to 98.6) on the day preceding her death. The pulse was 130 on entrance and continued frequent the highest record being 160 three weeks before death. Urinalysis, otherwise normal constantly showed the presence of considerable albumen, a few red blood cells and an occasional finely granular cast; the phenolphthalin functional renal test was 45/80 of the normal permeability. the blood examination made on admission showed hemoglobin 85%,

red cells 4,310,000, white cells 6,700; differential count,—polynuclears 64%, large lymphocytes 16%, small lymphocytes 18%, and large mononuclear lymphocytes 2%. Blood Wassermann test was negative. Roentgenologic examination showed marked splachnoptosis with gastric retention of bismuth for six hours; and probably pyloric ulcer. Analysis of the expressed gastric contents removed on passing the tube 23 inches, fifty minutes after an Ewald meal showed the quantity to be 100 c.c.; free acid to be increased from the organic acids as free hydrochloric acid was absent; a large amount of mucous present and there was evidence of very little digestion of the test meal; the presence of macroscopic blood was confirmed by the guaiac test. The expressed contents of the fasting stomach showed a quantity of 70 c.c. of fluid with an acid reaction; a total acidity of 105, with the absence of free hydrochloric acid and the presence of lactic acid; and a large amount of mucous. The presence of blood was demonstrated by both the benzidine and the guaiac tests.

For from seven to ten days preceding death the patient was semiconscious emitting loud screams at frequent intervals during which attacks she became cyanotic; occasionally severe convulsions took place; there was involuntary passing of both urine and feces. Death occurred June 21st, 1917.

No autopsy.

Case No. 13. G. B., white American female; aged 27; born and lived in Austin, Pa. First seen June 5th, 1917. In March 1915, the patient began to have abdominal distress about one-half hour after meals frequently accompanied by vomiting. She lost weight and became weak. Gastric ulcer was diagnosed for which a gastro-enterostomy was done at Austin, Pa., on February 7th, 1916. Ten days later on account of the severity of the symptoms, her appendix and an ovarian cyst were removed. Up to May 15th, 1916, the patient was in a fair physical condition, able to eat and retain solid food although she was having seven to eight stools a day. After May 15th, 1916, she again began to vomit after meals. On May 16th, 1917, the gastro-enterostomy was freed and a pyloroplasty was done. At this time a scaly pigmented skin eruption was present.

Upon physical examination the patient showed some mental weakness. The tongue was slightly inflamed and swollen while the oral mucous membrane showed marked redness. There was general tenderness over the abdomen. The skin of the face, the backs of the hands and the forearms presented the characteristic dermatitis of Pellagra in its chronic phase.

Case No. 14. H. J., American born, colored male, age 43.

Residing in Buffalo when seen June 1st, 1917. He had been ill for seven weeks with vomiting and diarrhea; there had been progressive loss of weight. Examination showed an unusually severe oral inflammation with marked salivation and with great difficulty in both talking and swallowing. The mucous membrane showed marked redness with denuded patches covered with exudate. There was present an acute dermatitis symmetrically distributed upon the dorsa of both hands and both elbows, occupying the sites common to this phase of Pellagra. Although the patient's Pellagra subsided he was quite weak for three months. A recent inquiry shows that he is now living in Trenton, New Jersey.

Case No. 15. W. O., white American female, age 43, resides in Buffalo. She came under observation June 7th, 1917. The patient described an attack similar to that for which she asked consultation as having occurred some two years earlier. The present attack began in January 1917, with an indigestion accompanied by vomiting and with intense paroxysmal abdominal pain which usually came on at night; she was constipated. She presented no other nervous symptoms than those due to habitual loss of sleep. Upon examination there was found a dermatitis typical of Pellagra, limited to the backs of both hands, dark and unlike any other skin eruption, deeply pigmented in typical areas. The affected areas were thickened and fissured, and accompanied by burning sensations. Under the use of the Roentgen rays the thickening of the skin disappeared while the redness and pigmentation continued unabated during the period that the patient was under observation. Today the patient shows slight improvement.

Case No. 16. H. J., male, white American farmer, aged 46; married and the father of six children. Born in the neighborhood of Brocton, New York, and always lived in Western New York. Family history was negative. Personal history was negative. The patient's surroundings had always been good; his diet had always been generous and varied. He had never used alcohol nor had he been exposed to other poisons such as lead and phosphorous.

The patient complained of skin and mouth trouble and of extreme weakness. The patient stated that two or three weeks prior to April 15th, 1917, he had had considerable trouble with his hands which he attributed to their being "chapped" and for which he applied a salve obtained from the druggist; a breaking out of "blisters" followed; later the skin was shed leaving the desquamating surface seen on coming under observation. Four days after first noticing the trouble with the hands swallowing produced considerable

pain in the tongue as well as of the entire lining of the mouth. The patient was emaciated. He showed an unhappy, anxious expression. The mucous membrane of the lips, gums, soft palate and cheeks and in fact everywhere else as far as examination was possible was a fiery red. The lower incisor and bicuspid teeth showed the presence of pyorrhea alveolaris. The skin of the dorsum of both hands from the tips of the fingers to above the wrist joints was symmetrically thickened, roughened, wrinkled and covered with fine scales while the natural furrows were exaggerated; the line of demarcation from the healthy skin was very sharp. An affected area extended entirely around the wrists. The only other part of the surface of the body involved was the face in the region of the nose where the patches formed wreath-like figures in a symmetrical manner.

His temperature was 100; pulse, 120; respiration, 24. His blood pressure was 100 m.m. systolic and 50 m.m. diastolic. His blood examination presented nothing remarkable;—the count showed the red corpuscles to be 4,200,000; the leucocytes, 7,000; the hemaglobin, 70%. The gastric contents gave free HCL, 37; a total acidity of 60; there was no occult blood. The urine examination was negative. The Wassermann blood test was negative. The ophthalmoscopic examination was negative. A Roentgenographic examination of the intestinal tract gave nothing definite. The patient died in October 1917, at which time he had developed a condition corresponding to an acute uremia accompanied by a terminal diarrhea. No autopsy.

Case No. 17. X., male, married, white American, aged 43. Born in Addison, New York, where he has always lived except during his attendance at school and short vacations. Family and personal history are negative. His environment was always good. His diet generous and varied except when "drinking." His habits were fair except for the abuse of alcohol. He was considered a heavy drinker for years; he made many efforts to stop trying the different alcoholic cures but soon returning to the habit; his last attempt to quit was made in the early spring of 1917, when he abstained until the first of June; an accident happened at this time to a member of the family and he again started to drink heavily, often taking as much as a quart or more a day during the four months following the accident.

In October 1917, he noticed a peculiar odor to his feet which bathing did not correct; subsequently they became inflamed and swollen; simultaneously, ulcers appeared in his mouth. A persistent nausea came on; a diarrhea appeared with from three to fifteen movements during the night and

morning; the stools were black and foul smelling. He continued to drink heavily. He was obliged to give up his work on account of weakness; he went to a sanitarium for three weeks.

Examination on December 30, 1917, showed the patient to be nervous and apprehensive about his condition. His hair to be dry and lustreless. The skin about his mouth presented a peculiar erythematous condition with slight scaling. The lips were swollen, cracked and bleeding. The mucous membrane of the mouth was fiery red; the tongue was swollen and deeply furrowed; the gums were spongy, presenting an appearance resembling "lead line." The dorsal surface of both hands was covered with a desquamating dermatitis of dark color and many bullae; the invaded areas ended abruptly at the wrists. The toes, the dorsum, and, part of the plantar surfaces of both feet presented an acute inflammation with considerable desquamation. The patient did not complain of itching but of a hypersensitive feeling. The rest of the skin appeared normal.

From a communication dated January 18, 1918, 20 days after the ingestion of alcohol had been entirely stopped, his condition improved in a very remarkable manner. His nervousness and his extreme apprehension entirely disappeared; his mental state readjusted itself so that he was nearly normal. His bowels became normal. The skin manifestations disappeared leaving but a slight disfiguration.

Case No. 18. H. A., white American female, age 27. Residing in Bradford, Pa. The patient came under observation February 20th, 1918. She suffered from pains in the lower extremities. Upon physical examination the characteristic pellagrous stomatitis, vaginitis and proctitis were found. A symmetrical erythematous eruption was present upon the dorsa of both hands, upon both elbows, upon both knees and upon the face. As the disease was subsiding, it presented the characteristic inflammatory dermatitis of this period. This patient seen but once and at so recent a date, seemed to have that type of Pellagra in which a prognosis was very unpromising.

Case No. 19. M. E. P., white female child, aged two years and eight months. Patient's home is in Montgomery, Alabama. The patient was first seen in August 1917. Her mother stated that her year old child had died in 1916 from the same disease and that she had brought the little patient North with the idea that she would receive benefit from the change. The patient had been seen at her home by Dr. Goldberger who made a diagnosis of Pellagra. The child appeared to be in good health; there were present no intestinal symptoms of

the disease. She had a dermatitis characteristic of Pellagra on both hands, on both arms from the shoulders to the elbows, upon the dorsa of both feet and upon the neck. The lesions of the hands were darkly pigmented. The collarette was typical. The progress of the disease was favorably influenced by the trip North for it had commenced to disappear. This case although not indigenous to Western New York is included because of its general medical interest.

CONCLUSIONS.

Of these nineteen cases of Pellagra that have come under my observation since 1910, eighteen were indigenous to Western New York, or the immediately adjacent territory, and one was from the Southern States. In the past eight years, ten came under observation for the first time during the seven years 1910-1917 and nine or about one-half during the year 1917-1918. The apparent increase in the occurrence of Pellagra as shown by these figures is supported by the mortality statistics for the State which records twenty-seven deaths from Pellagra during 1917 as against one in 1912. All of which goes to show that Pellagra is on the increase in New York State. Of the nineteen cases here reported, nine have died, eight are alive and the whereabouts of one is unknown. Of those yet alive two have shown no evidence of the disease during the past two years and two are now inmates of insane asylums.

From my statistics it is evident that Pellagra is no longer a rare disease in New York State but is rather one of comparative frequency. Notwithstanding the large literature upon the subject, medical men are not as yet readily or promptly recognizing typical cases of Pellagra. When it is appreciated that those cases, falling under my observation have done so because of the skin manifestations present and that the skin manifestations were so typical as to make the diagnosis unquestioned, then it also must be more than suspected that many cases of Pellagra offering no typical skin manifestations are occurring and the diagnosis is being missed. I would suggest that the incidence of Pellagra be seriously considered when a patient gives a history of periods of otherwise unaccountable ill health, with complaint of vague stomach troubles, with vague nervous symptoms and with greater or less mental depression and especially so if these symptoms are accompanied by uncontrollable diarrhea. It must be remembered that it is possible to have Pellagra without the typical skin manifestations although there is usually present at some time early in the course of the disease a dermatitis of varying duration. The history of the occurrence of a slight skin manifestation coupled with the above

symptoms makes the diagnosis almost certain in the event of the nonoccurrence of those typical lesions upon which today a positive diagnosis solely depends.

While the etiology of Pellagra is not yet positively determined the facts bearing upon the solution of this problem that from time to time appear make it probable that a definite cause will be determined in the near future. At present the parasitic and the dietetic theories hold the stage with evidence accumulating favorable now to one and then to the other.

In the series of cases here reported the following facts stand out clearly: The geographical occurrence is very similar to that of hookworm disease and of infantile paralysis, both of which are considered parasitic, in that these cases have cropped out in various localities without apparent rhyme or reason; hence it would seem that Pellagra must have a like causation. The rapid increase in the incidence of the cases since 1907 favors the parasitic and opposes the dietetic theory; the diets of the patients were practically the same from childhood, and were never restricted in either quantity or quality; while with some the diet was especially varied and generous. In none has there been even a suggestion of the poverty upon which other observers seem to dwell as at least an activating cause. The ingestion of very great quantities of alcohol by five of the patients would seem to favor the dietetic theory of the influence of an unbalanced ration. The peculiar dietetic idiosyncrasy of some of the patients also would seem to support the dietetic theory. The weight of the evidence gleaned from these cases would seem to favor the position that a parasite is the causative factor.

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471 Delaware Avenue.

Medical vs. Surgical Treatment of Cancer. Dr. Frederick Dugdale, of Boston, Mass., in the Charlotte Medical Journal, deplors the present lack of attention to therapeutics in treatment of cancer. Surgery is often only palliative, and frequently impossible. When metastases occur a treatment is needed that will reach all parts of the body through the circulation. The "Dugdale treatment"—specially prepared creosote combined with hydrocarbon and essential oils—is not offered as a specific nor as a substitute for justifiable surgery, but it does possess the desired bactericidal and germicidal properties and does not disturb the stomach. Since 1833, when Reichenbach first used creosote in treating tuberculosis, it has been employed by many clinicians for this disease and for cancer. Dugdale began using it for cancer in 1903, following the formulas of Lepin, Picot and Leo. His present treatment is dispensed in ampoules and administered by injection, by mouth, or as an external application to ulcerated areas. He advises its use in inoperable cases and as a surgical adjunct before and after operation. Dugdale claims that by its use inoperable cases have become operable and that some cases have resulted in clinical cures, without recurrences for periods varying from one to three years.

"Purgation Means Perforation." Thaddeus E. Wilkerson of Raleigh, N. C., Memphis Med. Mo., Nov. 1917, reports 4 cases of ruptured appendix from the injudicious use of cathartics. The warning is timely, though it may be questioned whether the rupture is due to the purgative drug so much as to neglect of necessary operation.

BUFFALO MEDICAL JOURNAL

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The Education of the Medical Profession by the War.

It is unnecessary to say that the War provides ample opportunity for acquiring experience along surgical lines. It may not be out of place, however, to call attention to several facts that may not be so apparent. This surgical experience is by no means limited to traumatisms that will be encountered rarely after peace is established. Indeed, a good deal of the technic of war surgery has been acquired and is being taught, not only didactically, but clinically in this country, based on traumatisms that closely simulate in their mechanic and bacterial results, those of war. For example, a compound fracture of the leg due to an automobile, with the limb ground into the mixture of dirt and manure on a city pavement, is practically identical with one due to a shell that caves the roof of a dug-out onto a soldier and covers the wound with Belgian soil. The large amount of material available for study and the free availability of bacteriologic examinations has already led to results showing that what have been considered non-specific bacteria are specific even so far as presumptive identification by clinical manifestations and preferential treatment by selected antiseptics are concerned. A point whose importance has scarcely been realized and which applies both to surgery and to internal medicine, is that military discipline, applied to the medical corps, tends to standardize methods of treatment, to eliminate personal peculiarities, and yet, in the long run, to determine the best method.

The experience in communicable diseases, in the control

and cure of venereal diseases, in psychiatry and many other lines, is already of great value and this value will be greatly increased even in a year.

But there are educational factors at work broader than opportunities to acquire detailed experience. At no time in the history of the country have so many medical men, especially of the rank and file, been relieved of the immediate necessities of practice and given post-graduate courses of all kinds, from the rather superficial broadening teaching, didactic and clinical, which will vastly improve the imperfectly prepared or rusty general practitioner as well as the specialist who has deliberately neglected to keep himself informed on various matters which he needs even to make him a good specialist, up to technical courses of the highest order. To a large degree, these forms of post-graduate training have been lacking on account of financial reasons but, to perhaps to an equal degree, because teaching forces have been rendered available as a matter of patriotism which were formerly refused as being occupied with official duties or even for narrowly selfish reasons.

With the exception of the A. M. A. meetings and a few congresses of short duration and many distractions and without any power to enforce actual study, more physicians have been gathered together than at any other period. The absolute equality of men thus gathered for intensive training, so far as they themselves are concerned and their absolute dependence on and subjection to authority is unprecedented. The steam roller process of crushing egoism and pomposity and the substitution for prestige along pre-existing lines, of a nearly equal financial status and of opportunities for rank according to somewhat different lines of ability may be expected to produce a more democratic spirit, yet with due recognition of merit, wherever found.

Most of the civil population has had a full conception of the term soldiering or "sojering." Whatever justice this conception may have had in the past, a spirit of hard work now permeates the army and only one ignorant of military matters can criticise some part of the work as a waste of energy. To a large degree, the minor hardships of military life and especially those that seem to be due to arbitrary requirement of inconveniences, are intended to adjust a man to the inevitable hardships of active service. One not only learns to "live in his trunk" but to be clean and to do his work under conditions approached in civil life by the hour or so when packed for a train that will leave in less than an hour. Odds and ends of time, periods of a few minutes otherwise wasted, must be used for shaving and other details of

the toilet, attending to correspondence, and for study. Recreation and longer tasks must be done in periods of a few hours formerly devoted to minor requirements. On active duty, the surgeon must attend to a number of patients considered impossible by most truthful physicians in civil life and to an amount of book keeping which the civilian either leaves to a trained assistant or neglects entirely.

BOOK REVIEWS

Books mentioned may be inspected at and ordered through this office. So far as possible, books received in any month will be reviewed in the issue of the second month following. Pamphlets, quarterly and similar periodicals, reports, transactions, etc., will, as a rule, merely be mentioned.

A Treatise on Clinical Medicine. By William Hanna Thomson, M. D., L.L.D., formerly Professor of Practice of Medicine and of Diseases of the Nervous System in the New York University Medical College; Ex-President of the New York Academy of Medicine, etc. Second Edition Revised. Octavo volume of 678 pages. Philadelphia and London: W. B. Saunders Company, 1918. Cloth, \$5.50 net.

The scope of this volume includes most of the diseases encountered in general practice, and they are classified according to their exciting causes. It begins by discussing the meaning of certain common and important symptoms—"catching cold," pain, emaciation, cough, dyspnea, etc. Then follows a discussion of the remedies used in treatment with practical observation on their limitations and their rational uses. Part II deals with the infections, the "greatest cause of disease and death," prefaced by a discussion of the various infecting organisms. The diseases of special tissues and organs are then taken up in order. The author aims to make his book of practical service to the physician, and this he has accomplished in great measure by eliminating much of the material essential to the text-book and giving us in its place a large amount of information likely to be available to the man who has read the classical authorities and wants something different.

The Medical Clinics of North America. Volume 1, Number 5, (The Chicago Number, March, 1918). Octavo of 241 pages, 35 illustrations. Philadelphia and London: W. B. Saunders Company, 1918. Published Bi-Monthly. Price per year: Paper, \$10.00; Cloth, \$14.00.

Fifteen authors have contributed clinical studies covering a wide range of medical subjects. The temptation to present clinical curiosities has not been allowed to interfere with the practical aims of the editors. The cases are selected with good judgment and the volume is immediately useful to every practitioner.

The Practice of Pediatrics. By Charles Gilmore Kerley, M. D., Professor of Diseases of Children, New York Polyclinic Medical School and Hospital. Second edition, revised and reset. Octavo of 913 pages, 136 illustrations, Philadelphia and London: W. B. Saunders Company, 1918. Cloth, \$6.50 net.

The book begins with the management of the normal child, particularly with reference to diet. The second chapter discusses examination and diagnosis with many useful observations on the management of sick children. The third chapter takes up in detail the diseases of the new-born, and the remainder of the book deals with all the diseases incident to childhood. The last three chapters contain a very complete presentation of the various therapeutic measures applicable to children including a classified list of drugs and dosage for different ages. The author's style is scholarly and sympathetic. He observes that "a well-bred animal, treated from birth to maturity as are many children, would cut a sorry figure in the animal world." Throughout his book he appeals to us to see that the child has a fair chance. In preparing the second edition much material has been added and old chapters have been rewritten where necessary.

Modern Operative Bone Surgery With Special Reference to the Treatment of Fractures. By Charles George Geiger, M. D. Cloth, 8 vo., XV. 286 pages, with 120 illustrations. Philadelphia, F. A. Davis Co., 1918.

The author devotes his monograph to the consideration of the autogenous bone transplant, which he regards as "THE safe and sound procedure" in osteoplastic surgery. The theme is introduced by an explanation of the histology and physiology of cartilage, periosteum and bone, and the processes by which bone is repaired. In two chapters, well illustrated by roentgenograms, he gives his reason for condemning the use of all foreign material in bone surgery. Over 200 pages of the book are filled with the technical details of the procedures recommended and employed by the

author. The Geiger electric motor, for bone work, and many other accessories and devices originated by the author are described in detail with the aid of abundant illustrations. The succeeding chapters deal with all varieties of fractures and abnormal bone conditions to which autogenous bone transplants can be applied. The book is unique and indispensable to the surgeon who works in this precise and difficult specialty.

New York State Report of the State Commissioner of Highways, 1916. A splendid map accompanies this book.

OUR CONTEMPORARIES

Editorial, Southern Medical Journal, Birmingham, Ala., May, 1918.

Surgeon-General Gorgas is sixty-three years young.

The Washington Post on May 7 is responsible for the statement that Surgeon-General Gorgas will reach the retiring age of sixty-four on October 3, 1918. Of course this does not mean that General Gorgas will be retired in October, because no one would consider retiring a man who every day is demonstrating his youth and efficiency in a position of such great responsibility as that of Surgeon-General of the United States Army during the greatest war in history.

Those who are in a position to know, regard General Gorgas as second in efficiency only to President Wilson; and they marvel at the work he has accomplished in the past year. Only a young man in vigorous health could have lived through what the General has done since the War began. Office hours begin in his office at 9 o'clock, but General Gorgas is there by 8 or 8:30, and he is one of the last to leave in the afternoon.

* * * * *

If all the soldiers lived the hygienic life that he follows, the Army sickness and death rate would be negligible, though it should not be forgotten that the morbidity and mortality rates among our troops are less than half those in the Spanish-American War, and are lower than those of any other army that was ever gotten together.

Of course no one has considered it possible for General Gorgas to be retired during this War. Millions of mothers and fathers and other relatives and friends of our soldiers thank God every day that General Gorgas is directing the army of doctors who are fighting diseases that are as dangerous and that are as insidious enemies to mankind as the

Huns. They feel comforted every day on realizing that Gorras is safeguarding the health and lives of their boys.

Dr. Bayard Holmes of Chicago announces the first number of the journal called "Dementia Praecox Studies." It will be published quarterly at \$5.00 per year.

Dr. Ales Hrdlicka of the Smithsonian Institution at Washington, D. C., announces the first number of a new journal, called the "American Journal of Physical Anthropology." It will be published quarterly, and will have the co-operation of the Committee on Anthropology of the National Research Council.

Medical Military Service Record.

The Jour. of the A. M. A. estimates the total number of physicians in the country at 144,116, serving a population of 106,543,317. For reason previously stated, we believe that the census of physicians includes a great many who have not been in practice but in some other vocation for some years not to mention those who are more less retired. The estimate of population, based on previous rate of increase is probably also somewhat exaggerated as our increase of about 20% per decade has been due to immigration about as much as to natural increase. However, both figures are substantially correct and indicate one physician to 739 people and to 21.4 square miles of territory—which can be considerably increased without leaving any to suffer from lack of professional care. 4,864 of the physicians are women, not directly available for military service according to precedent though some are already in the military service and the majority have expressed a willingness to serve and have already engaged in activities quite as useful in an indirect way. 107,255 physicians are under 55 and 75,498 under 45. 81,239 are members of county societies. 19,692 are already commissioned—13.7%, the proportions varying from 7.8% for Arkansas to 23% for Arizona, although the former has slightly less than the average clientele and area per physician and the latter and considerably more than the average clientele (797) and area (294.2 square miles).

The figures for N. Y. State and the western counties are as follows:

NEW YORK

County	Area Square Miles	Sq. Miles per Physician	Population Est. 1917	Population per Phys.	Total No. Physicians	Total Women Physicians	Physicians Under 45	Physicians under 55	Members of Co. Society	Commiss'd in M.R.C., etc.
Allegheny	1,047	17.4	41,412	690	60	1	23	29	42	10
2Broome	705	4.6	95,450	523	153	8	62	108	92	19
Cattaraugus	1,343	14.4	75,535	812	93	3	42	59	54	18
3Cayuga	703	7.1	70,261	706	99	8	27	64	65	9
4Chautauqua	1,069	7.1	121,570	805	151	2	57	98	102	22
5Chemung	407	4.4	60,736	660	92	7	41	61	56	13
Chenango	894	14.9	37,083	618	60	3	24	32	38	9
Cortland	503	11.2	30,469	677	45	..	12	23	37	3
Delaware	1,449	26.3	46,166	839	55	..	15	36	26	3
7Erie	1,034	1.1	598,549	646	926	41	471	682	651	135
Genesee	496	10.3	41,963	374	48	3	22	31	37	6
Livingston	631	8.9	38,752	545	81	6	28	32	50	9
10Monroe	663	1.3	339,157	654	518	30	270	382	351	83
13Niagara	522	4.2	115,263	929	124	..	60	94	73	19
14Onondaga	1,250	5.0	178,860	715	250	10	127	184	180	32
15Onondaga	781	1.9	228,307	546	418	18	176	301	228	41
Ontario	649	6.9	55,580	591	94	3	34	60	73	1
Schuyler	336	13.4	14,004	560	20	..	10	14	18	3
Seneca	336	7.1	26,972	573	47	2	19	31	28	6
Steuben	1,401	11.5	83,755	686	122	5	48	75	83	13
Tioga	520	11.8	25,624	582	44	1	13	27	23	7
Tompkins	476	5.5	37,708	438	86	8	31	54	63	14
Wayne	599	9.1	54,816	830	66	..	20	40	38	9
Wyoming	601	11.1	33,495	620	54	3	15	41	37	7
Yates	343	11.1	18,922	610	31	1	10	22	22	4

2. Includes Binghamton, population 55,791; physicians 107 (M.R.C. 14).

3. Includes Auburn, population 37,823; physicians 61 (M.R.C. 8).

4. Includes Jamestown, population 40,415; physicians 48 (M.R.C. 7).

5. Includes Elmira, population 41,278; physicians 79 (M.R.C. 12).

7. Includes Buffalo, population 475,781; physicians 857 (M.R.C. 123).

10. Includes Rochester, population 264,714; physicians 461 (M.R.C. 77).

13. Includes Niagara Falls, population 47,058; physicians 49 (M.R.C. 10).

14. Includes Utica, population 89,272; physicians 150 (M.R.C. 14).

15. Includes Syracuse, population 158,514; physicians 336 (M.R.C. 35).

Allegheny County

ALFRED—Emerson Winfred Ayars. BELMONT—Ralph Elmer Robinson. BOLIVAR—Laurence Hackett. CANASERAGA—Carl Geo. Schwan. CERES—Frederick John Pfisterer. CUBA—Theron Blain Bond. FRIENDSHIP—Harold MacMurray Johnson. RUSHFORD—Hanford Kendall Hardy. WELLSVILLE—Ray M. Eaton; Frederick Eugene McCarty.

Broome County

BINGHAMTON—Samuel M. Allerton; Carleton T. Bagley; Raymond Gernand Bell; Myer Sol. Bloom; John D. Bowen; John Groat Corson; Don M. Hooks; Harry Isaac Johnston; Ulysses Silver Kann; Sylcanus James Nunn; Frank W. Sears; Charles Anthony Squires; Daniel C. O'Neill; Lester E. Sanford. ENDICOTT—Dwight Gullford Dudley; James Santee McNett. JOHNSON CITY—John Walter Farrell. PORT DICKINSON—George Jesse Ganow. UNION—Ray Holly Humphrey.

Cattaraugus County

ALLEGANY—Jay Gould. DELEVAN—Myron Everett Fisher. EAST

RANDOLPH—James Edgar Crossman. GOWANDA—Herman Walter Johnson; Ira Warner Livermore; Frederick Perlee Schenkelberger. OLEAN—James Jay Clark; Clarence Albert Greenleaf; John Alexander Johnson, Jr.; Raymond Bartlette Morris; Benjamin Van Campen; Donald Angus MacDuffie. PERRYSBURG—Arthur Burt Graves. SALAMANCA—John Conrad Hoefler; Charles Arthur Lawler; James Almon Taggart; George Beckwith Ubel. ALLEGHENY—Eugene Daniel Quinlan.

Cayuga County

AUBURN—Francis Joseph Bennett; Eugene Napoleon Boudreau; John Wordsworth Copeland; Raymond Fleming Johnson; Wm. Henry Kober, Jr.; Rob Roy McCully; Forest Ray Mildren; Maxwell Kemper Willoughby. WEEDSPORT—Clinton Eddy Goodwin.

Chautauqua County

CASSADAGA—Henry Salem Edmunds. DUNKIRK—George R. Irving; Henry Jos. Meister; Norman Leo Sheene; Walter Hall Vosburg; John Charles Webster. FREDONIA—Roy John Juhre; Harry Elmer Wheelock. FREWSBURG—Francis John McCullo. JAMESTOWN—Frank Perry Goodwin; Floyd Warner Hayes; Walter G. Hayward; Edward Leban Hazeltine; Bergen Fred Illston; Milton John Johnson; William Miller Sill. KENNEDY—George William Batt. RIPLEY—Paul Sterrett Persons. SHERMAN—Guy Granger; Harold Elliott Shaver. WESTFIELD—Gunnii Julius Busck; Roswell Fellows Foster.

Chemung County

ELMIRA—Floyd Pinckney Breese; Charles Hendry Erway; Arthur Clair Glover; Floyd Harding Jones; Louis Eugene McCanna; Edgar Warden Phillips; Stewart Stow Piper; Daniel Edgar Pugh; Arthur C. Smith; Donald Joseph Tillon; Raymond A. Turnbull; Bert Grant Voorhees. VAN ETEN—Benjamin Franklin Colegrove.

Chenango County

GUILFORD—Blinn A. Buell. LINCKLAEN—Frederick Dudley Keppel. NORWICH—Edwin Fred Gibson; William Edward Hartigan. OXFORD—Burton Alexander Hall. SHERBURNE—Archibald K. Benedict. SMYRNA—Leroy Dilmore Soper. SOUTH OTSELIC—Jaynes Mott Crumb; Archibald Thomas Perkins.

Cortland County

CORTLAND—James J. Parsons; Daniel Robert Reilly. VIRGIL—John Harry Evans.

Delaware County

DELHI—Grover Asa Stillman. DOWNSVILLE—Fred De Grande Wilson. SIDNEY—Ralph Henry Loomis.

Erie County

BUFFALO—Francis Argus; Lloyd Kenneth Babcock; Antonio L. Barone; Peter Joseph Barone; Samuel Barone; Charles Joseph Barone; George Cosimo Barone; Herbert Henry Baucus; Lynn Staley Beals; George Adam Becker; Edwin L. Beebe; Lawrence Felvin Belzer; A. L. Benedict; Maynard Gilmore Bensley; Joseph Barton Betts; Plynm Morton Bolton; Joseph Patrick Brennan; Jos. Brumberg; Patrick H. J. Buckley; Boleslaw M. Bukowski; Lorenzo Burrows, Jr.; John Cunniff Brady.

O. J. Case; Marshall Clinton; Julius Y. Cohen; Raymond Cleveland Conklin; George Ferdinand Cott; Harold Wm. Culbertson.

David M. Davis; Robert Edward DeCew; Richard Newnham DeNiord; Robert Paul Dobbie; Timothy Francis Donovan; Henry DeWitt Duryea.

Earl Leo Eaton; George J. Eckel; Albert Richard Ellison; John Fitzgerald Fairbairn; Lee Francis Masten; Carl Grover Frost; Edward Lycander Frost; Frederick William Filsinger; Urvan Andrew Fischer.

Albert August Gartner; Harvey Russell Gaylord; George John Geisler; Milton Harry Goldberg; John C. Grabau; Irving Franklin Gram; Samuel Grienstein; John George Grotz.

Francis John Haley; George McK. Hall; Barton E. Hauenstein; Raymond Hensel; Wm. Oakley Hill; Robert W. Hinds; Harry Joseph Hammond.

Harold Bartlett Johnson; William Harry Jones; Daniel Jung; Russell Stewart Kidder; Robert King; Chas. Gowen B. Klophele; Clarence Perry Kummer; Frank Kruse; Leon Sebastian Kurek.

Jos. Peter La Duca; Charles W. Lane; Sabrater C. Lojacono; Charles Edward Long; Frank Henry Long; Earl Henry Lormor; William Chisholm Lucas.

Walter Louis Machemer; Wallace F. MacNaughton; Baldwin Mann; Herman Frank May; William Lee McCanty; Arthur Everett McCarthy; Harold James McDonald; Hugh Chauncey McDowell; Descum Clayton McKenney; Michael James McMahon; Roland Otto Melsenbach; Edward Frederick Meister; John Anthony Metzen, Jr.; Rudolph C. Miller; Vincent Chas. Moscato; Jerome Aloysius Murphy; Thomas Henry McKee.

Joseph Aloysius Nowicki; Oscar J. Oberkircher; Geo. Melvin Oppermann; William Ostrow; Frederick Wm. Palmer; Charles C. Panzarella; Harold Alexander Patterson; William Ward Plummer; Frank Nelson Potts; Thomas H. Powick; Leon Hastings Prior.

Nelson Gorham Russell; Leo Marks Sachs; Arthur C. Schaefer; Charles Simon; Herbert Alexander Smith; Edward Archibald Southall; Frederick Edward Sperry; John Gurney Stowe; Fredk. Ettore Strosal; Jas Cornelius Sullivan.

Earl Wm. Thoma; Carl Tompkins; Haworth R. Traver; Alfred Herbert Vogt; Frank Gebhard Walz; John Henry Watson; Harry Milton Weed; Grover Wm. Wende; Carlton E. Wertz; Hiram Samuel Yellen. COLDEN—Warren Z. Dell. HAMBURG—Amos John Minkel. COLLINS—Herman Lester Raymond. LACKAWANNA—Harry Alexander Scott; Kenneth Allan Smith; Edward A. Twist; Roy B. Woodward. LANCASTER—Clarence Herbert Mackey. SPRINGVILLE—Gregory Everett Stanbro. TONAWANDA—Howard Cousins Fairbanks; Archibald William Thompson. WILLIAMSVILLE—Harry Bestow Huver.

Genesee County

BATAVIA—Anthony Joseph Greco; Clarence Bentley Gould; Ward Beecher Manchester; Elmer Elwell Owen; Henry Morris Spofford. BYRON—Edgar Bieber.

Livingston County

AVON—Charles Guy Swan. DANVILLE—Clark Vernon Fairbanks. GENESEO—Charles I. Newton. LIVONIA—Vernon Leslie Bishop. NUNDA—William Erwin Diefenbach. SONYEA—Elias Cecil Fischbein; Charles Aubrey Joy; James Frederick Munson. YORK—Benj. Harrison Dike.

Monroe County

FAIRPORT—William Henry Ferrier; George S. Price. HILTON—Walton Hovey. ROCHESTER—Max Alonzo Almy; Frank B. Baldwin; Leon James Barber; Edmund C. Boddy; Anthony Bondi; Charles O. Boswell; John Ruskin Bradley; Raymond John Brown.

Michael Lester Casey; Alfred F. Cassebeer; Milton Chapman; Leighton Randolph Cornman; Joseph Richard Culkin.

Sol Charles Davidson; James Clement Davis; Michael Richard De Vita; John C. Dessloch; Raymond E. Elliott; William V. Ewers.

Ralph Roswell Flitch; James Murray Flynn; John Denison Fowler.

George H. Gage; Frederick Joseph Garlick; George Washington Goler; Philip Gordon; Thomas John Goundry; Corden Thorne Graham.

Edward L. Hanes; Clayton Kendall Haskell; Charles W. Hennington; Joseph P. Henry; Wallace Herriman; Charles L. Hinchey; James LeRoy Hondorf; Charles W. Hoyt; Joseph Edward Hurley.

Edwin Stanley Ingersoll; William B. Jones; Albert D. Kaiser; Franklin Austin Knope.

Abraham Lebendig; Macy Levi Lerner; William Alexander Macpherson; Charles Maggio; Henry Elsner Marks; David Ralph Melen; Alvah Strong Miller; Harry Adelbert Miller; Howard D. Mitchell.

Lawrence James Nacey; Francis J. O'Brien; William K. Otis.

Myron Botsford Palmer; Paul Martin Parker; William W. Percy; Norman Jos. Pfaff.

Hiram Randall; Arthur Patterson Reed; Ray D. Richman; Francis John Robinson; Samuel Hendricks Rosenthal.

Jacob Sachs; Harry Allen Sadden; William Waldo Schairer; Benjamin James Slater; Alexander Lorne Smith; Harold Launt St. John; Charles Clyde Sutter; John M. Swan; Frank Sackett Schonover, Jr.

Julius T. Waterman; Edward Tubbs Wentworth; William Richardson Woodbury; Warren Wooden; Harry Wooden; Harry Wronker; Chas. Carmelo Tereal. SULLIVAN—Elsworth Elliot.

WEBSTER—James Byron Foster; William Stanton.

Niagara County

JOHNSON CREEK—Murray F. Mudge. LOCKPORT—Lemuel Rankins Hurlbut; Henry Hamilton Mayne; Frank Austin Walder; Lyman Hall Wheeler. NEWFANE—Edwin Shoemaker. NIAGARA FALLS—Raymond Samuel Barry; John Lewis Bishop; Charles C. Childs; Edward Eugene Gillick; Howard Joseph Hutter; Frederick N. C. Jerauld; Robert J. Lawler; Ernest Martin Guido-Rieger; John Preston Sharp; Francis Joseph Talbot. NORTH TONAWANDA—Harry Oren Maldiner; Martin Francis Nalon. YOUNGSTOWN—Lewis William Falkner.

Oneida County

CAMDEN—George Canfield Lyons. CLARK MILLS—Fred Goodwin Jones. CLINTON—Roy Bicknell Dudley; Varney Bernard Hamlin; Erwin G. MacFarland. NEW YORK MILLS—Henry Miller Mitchell. ORISKANY FALLS—Robert Bruce Wilson. ROME—William Lester Grogan; Ray Jay Marshall; Maxwell Comrie Montgomery; William Bradley Reid; Le Clare Stuart; Kent Eugene Williams. UTICA—Charles H. Baldwin; George B. Campbell; Francis Temple Chase; Jason Henry Conger; Frederick Christopher Devendorf; Arthur Rogers Grant; Miles Wendel Johns; John Joseph Leary; Harold Cleveland Lyman; Stephen A. Mahady; Nicholas Alfred Sullo; Robert Francis Zimmerman; John Richard Fischer; Frederick Thomas Owens. VERNON—John Dean Shipman. WATERVILLE—Lewis Furbeck Cole; Edward Gove Randall; Howard David MacFarland.

UTICA—John Richard Fischer; Frederick Thomas Owens.

Onondaga County

CAMILLUS—George Hamell Shaw. JORDAN—Walter W. Osgood. MANLIUS—R. M. Ballantyne. MOTTVILLE—Milton Edward Gregg. POMPEY—Frederick Austin Hunt. SYRACUSE—Adelbert Cleveland Abbott; William Dewey Alsever; Archer D. Babcock; Clyde O. Barney; Arthur W. Brennan; George Sidney Britten.

Murray A. Cain; Donald Smythe Childs; Clarence E. Coon; John James Corbett.

Raymond John Devine; Brewster Clarke Doust; Henry Burton Doust.

Scott Romain Fisher; Albert Alton Getman; Herbert Gifford.

Lee Arthur Hadley; Herbert Israel Kallet; Jefferson B. Latta; Glendon Richard Lewis; Daniel F. Luby.

Henry Alexander MacGruer; Brooks Walton McCuen; Arthur Dubois Meyers; Bernard Stanislaus Moore; Leonard Stevens Nolan.

Philip Sheridan Potter; Robert Case Scott; Myles Bernard Sharkey; George Kellogg Smith; Samuel Stewart; Earl Vincent Sweet; William E. Truax.

Edward Seguin Van Duyn; Earle Cyrenius Winsor; Edward Judson Wynkoop.

Ontario County

CANANDAIGUA—Alfred W. Armstrong; Frederick Coe McClellan. CLIFTON SPRINGS—Samuel Darragh Earhart; Samuel Timothy Nicholson, Jr.; Walter Stevens Thomas; Walter Longfellow Weeden; John Alexander Wentworth. GENEVA—James Stevenson Allen; Isaac Williams Brewer; Thomas W. Maloney; Frank Hassan Snyder; Thomas William Maloney. GORHAM—Lloyd Frederick Allen. SHORTSVILLE—Daniel Alverson Elseline. STANLEY—Charles W. Selover.

Schuyler County

ALPINE—John William Burton. VALOIS—Palmer H. Lyon. WATKINS—Noah Philip Norman.

Seneca County

OVID—John Graham Gordon. SENECA FALLS—Robert Knight; Frederick William Lester. WATERLOO—Francis Victor Hoehn; William Wallace Carleton. WILLARD—John Francis McNeill.

Steuben County

BATH—Raymond Coleman Hill. CANISTEO—Harold Hubbard Mitchell. CHOCTON—John H. Miller. CORNING—Willis Sylvester Cobb; Ralph Francis Gregorius. HORNELL—Milton Gardner Burch; James Raymond Kelly; Leon M. Kysor; Frederick Carver Robbins; George Ellis Taylor; William Joseph Tracy; Clark Anson Wilcox. JASPER—Leon Mitchell Wilbor.

Tioga County

NICHOLS—Leroy Jakway Osborne. OWEGO—Kennedy Furlong Rubert; Sidney Welles Thompson. SPENCER—Frederick Terwilliger. WAVERLY—Paul Eugene Betowski; Arthur John Smith; Frederick Hallet Spencer.

Tompkins County

ENFIELD CENTER—David Robb. GROTON—James Howard Van Marter. ITHACA—John Frank W. Allen; Reed Brinsmade Bontecon; Albert Cyrus Durand; Chas. Henry Gallagher; Walter Bonnell Holton; Minor McDaniels; Samuel Archer Munford; Martin Buel Tinker; Isador Mack Unger; Otto Emil Utzinger; Royden Mendeville Vose. LUDLOW-VILLE—Ira A. Allen.

Wayne County

ALTON—William George Lewis. LYONS—Reuben Spencer Simpson. MARION—Arthur Besemer. NEWARK—Louis Stone Kelley; John Andrew Morrissey; Cyrenius Adelbert Newcomb; James Raymond Sanford. PALMYRA—Lee Rice Pierce. WOLCOTT—Samuel Wilson Houston.

Wyoming County

ATTICA—Willard DeForest Preston. CASTILE—Harold Elmer Foster. GAINESVILLE—George Stephen Skiff. PERRY—Thos. M. Calladine, Jr.; Milton Oren Houghton. WARSAW—James Frank Crawford. WYOMING—Arthur Willard Hubbard.

Yates County

BRANCHPORT—John Henry Rose. PENN YAN—Edwin Carlton Foster; Herbert Wood Matthews; Bernard Samuel Strait.

The names are given to June 1. Our readers are urged to preserve this list, inform us of any corrections and to preserve the supplementary lists which will be published from time to time.

It will be noted that about a third of all physicians under 55 are between 55 and 45 and this proportion seems to hold good for the men in military service, indicating that the physical condition, desire for service and ability to make the necessary financial sacrifice is equally great at advanced ages.

TOPICS OF PUBLIC INTEREST

Medical Dept. U. S. Army. The (regular) Medical Corps (May 10) consisted of 869 officers, 1 major general, 65 colonels, 110 lt. Cols., 298 majors and 395 lts. All remaining members of this corps as it was constituted before the war—with possibly minor exceptions—are now of at least the rank of major, there being no captains at all and the lts. being recent appointees. The Medical Corps of the N. A. has been used mainly to furnish commissions for those content with appointments for the duration of the war, and who, for one reason or another could not receive sufficient recognition otherwise; at least this is the logical deduction from its make-up of 3 brigadier generals, 12 colonels, 92 lt. cols. and 8 majors. The M. R. C. consists of 1281 majors, 1205 active), 4629 captains (4277 active), 12,923 lts. (11,208 active, total 18,833 (active 16,690 active).

Control of Venereal Disease in N. Y. State. The Whitby bill went into effect May 5. This law resembles in a general way that of Australia and is the most radical in the U. S. It provides for the arrest and detention of those affected and places the enforcement with local health boards. The general principle of release on recognizance or parole is included but if health authorities are not convinced that treatment will be carried out, the patient may be sent to a hospital. Free diagnostic and therapeutic aid will be given as necessary, by the State Dept. of Health. This is a form of co-operation by the state with the work instituted by the Army.

Women Physicians, to the number of 1875 have volunteered for military service if needed and a few have been accepted. The Council of National Defense state that more than third of all women physicians have formally listed themselves.

Aviation Deaths in this country, since the beginning of the war total 99, beside 3 at Camp Borden, Can.

The Buffalo Bureau of Water publishes the following statistics and estimates: (round numbers given) 1913, 50,000,000 gallons pumped; successive years: 52, 53, 58, billions and for 1917, 61,470,593,540. Average cost per gallons, \$5.93. Average per capita distribution, 339 gallons, divided into industrial use 100, legitimate domestic use 50, municipal use (street cleaning, fires, etc.) 25, unnecessary waste 164. We have always understood that Buffalo had the most liberal

water supply of the world. Chicago pumps 226 gallons per capita, Detroit 189, Cleveland 118, Milwaukee 110. Army cantonments with an adult male population, a disproportionate number of animals and of peak loads, due to regular habits, require about 50 gallons, though a larger supply is regarded by many as desirable.

The Will of Mrs. Amory Houghton, Jr., leaves \$5,000 to the Corning Hospital.

The War Department authorizes the following statement: Prisoners of war are entitled to receive and send letters, money orders, and valuables, as well as parcels by post (not exceeding 11 pounds in weight), when intended for international mail, free from all postal duties.

Domestic mail and money orders are subject to the regular postage charges and money order fees.

All mail should be plainly addressed to the prisoner of war, giving his rank, full name, and the name of the prison camp where held (if known), followed by "Prisoner of War Mail, via New York." In addition, all prisoner-of-war mail should bear the name and address of the sender written in the upper left hand corner, and in the case of parcel-post packages, the relationship of the sender to the prisoner of war addressed should be clearly stated, immediately following the sender's name. Parcel-post packages for prisoners in enemy countries may not be sent by organizations or societies, and only one such package per month may be sent to any one prisoner of war.

Soldiers and Sailors of the U. S. forces, when furloughed and traveling at their own expense, will be granted a rate of approximately one cent per mile. This fare will be available on delivery to ticket agent of certificates signed by commanding officers.

Twenty Uniforms for women in war work are now officially recognized in the U. S. The women wearing them are munition workers, telephone and radio operators, yeomen, employees of the Shipping Board and the Food Administration, Red Cross workers, and the Young Women's Christian Association workers abroad, Woman's Motor Corps of New York, Girl Scouts, and students in the National Service School of the Woman's Naval Service, Washington, D. C.

250 Telephone Girls have been chosen to go to France as Signal Corps Unit. In addition to conforming to the quali-

fications set by the U. S. Signal Corps for membership, the operators were required to pass a psychological examination to determine their motives for wanting to go abroad. They will be stationed in groups of 10 in American bases of supplies and points of embarkation and will not be nearer than 23 miles to the front.

Medical Reserve Corps. More physicians are needed. Volunteers will probably be accepted immediately and commissions forwarded. The slip inclosed with the commission should be signed and returned without delay. Orders may then be expected in 15 days, unless immediate service is requested or an emergency arises. Initial service is usually at a training camp. This is usually the hardest assignment, because of the necessity of changing so many established habits and because a great deal of training must be accomplished in a minimum of time—the standard period being 3 months but the present emergency often tending to shorten the course. Physicians should realize that, as soon as they have accepted their commissions, they are under military orders and must obey promptly and exactly, without question, and conform to regulations new to their experience and which they must take pains to learn.

The average 1000 men commissioned in the M. R. C. is subject to the following losses before or shortly after becoming available for active duty: 31 for physical disability, inaptitude 13, domestic and community needs 4, deaths 3, resignations 10; total 61. Study this list; it will assure you of two things: that there is little reason to fear that you cannot make good in military service and still less chance to get out of the service for any reason because, after entering, you find that it involves some genuine sacrifice and hard work.

Salaries are \$2000, \$2400 and \$3000 for the respective ranks of 1st Lt., captain and major. Foreign service gives an increase of 10% and an allowance in lieu of quarters will now be given to all actually maintaining homes for genuine dependent families, amounting to between 20 and 25%. The necessary initial equipment costs somewhere from \$150 to \$250 and, for the most part, represents clothing, bedding, etc., which would have to be bought anyway. Not more than \$50 can be considered as an ultimate expense. Routine personal expenses and renewal of equipment will cost \$50-\$100 a month, \$75 being a fair average. The relative inexpensiveness of military life in war is mainly due to the necessity of living a simple, industrious life. Young men have a good chance to enter the regular Medical Corps and are eligible to promotion to the rank of captain after a year.

The St. Paul Medical Journal has been discontinued, to make way for Minnesota Medicine, the official organ of the state society. We trust that the new journal will maintain the standards of the old.

The Service Flag of the North Shore Branch of the Chicago Medical Society has recently been dedicated. It bears 100 stars. This may be a suggestion for other medical societies. At any rate, we would like to publish a full list of the Buffalo and Western N. Y. physicians in service and, as the men themselves are too modest and too much hurried on receipt of orders to send in their names and the Surgeon General's office too crowded with more necessary work, such lists which will be of permanent historic interest, should be taken up by committees of county and similar societies.

Death of Last Literal Son of the Revolution is announced from Omaha, May 8; Owen Moore, born in Vernon, Oneida Co., N. Y. 81 years ago, the son of a revolutionary soldier who enlisted at 18 and served at Valley Forge. Several years ago, we announced the death of the last Son of a Revolutionary Veteran and were corrected by Dr. Palmer of Lockport, whose father fought in the Revolution. Dr. Palmer's letter reminded us of a Revolutionary soldier who had a son born in 1843 or 1844 and, while he died and while few Revolutionary veterans could have been alive and procreating so late, there were undoubtedly a good many sons born of Revolutionary soldiers in the 1830's and it is very doubtful if there are not a considerable number still living.

The National Baby Saving Campaign, aiming to save 100,000 babies a year but not attempting to describe how it will furnish the direct evidence, has resulted in the appointment of the following local committee for Buffalo, by Dr. Franklin C. Gram, Acting Health Commissioner; Drs. Edward Durney, Carl G. Leo-Wolf, Douglas P. Arnold, H. K. De Groat and Mrs. Anna Hanson.

Birth and Death Registration. 27 states, the District of Columbia, the territory of Hawaii, and 43 cities in other states are now included in the area for which the Census Bureau publishes death statistics. The registration area started in 1902 with about 40% of the population, remained unchanged till 1906, and now includes about 75% of the population.

Similar collection of birth statistics began two years ago with about 31% of the population—N. Eng., N. Y., Pa.,

Mich., Minn., D. C. The addition of Md., Va., N. C., Ky., O., Ind., Wis., Utah and Wash. brings the part of the population covered up to 51%. The problems of military registration have emphasized the need of extending accurate collection of vital statistics to the whole country.

The Red Cross and Animal Experimentation. In view of the protests by antivivisectionists, the Red Cross has decided to discontinue its appropriations for animal experimentation. The Buffalo Academy of Medicine has recently filed a counter-protest, as have probably many other medical organizations. The argument in favor of proper use of laboratory animals needs no discussion in a medium of this kind. However, the medical profession should not ignore certain reasons of expediency. The Red Cross is an exceedingly necessary adjunct to the government in the conduct of war, not only by relieving the official channels from the collection of a large amount of money by taxation and of various duties that can in many ways be discharged by the more elastic methods of an unofficial organization better than by government officers, especially when haste, at the disregard of formalities, is required. Red Cross funds and the actual work, depend largely on popular sentiment and on the sentiment of that part of the community which always has looked with disfavor on animal experimentation. Animal experimentation is not a logical function of the Red Cross itself; it can merely assist by turning over part of its funds and it is a very practical question whether an insistence on co-operating with experimental and therapeutic laboratories might not reduce the receipts in dollars and donated material and labor to a still greater degree. The immediate problem is not of scientific logic or ultimate ends but of actual fact. If, as seems probable, ample funds for animal experimentation can be secured more directly, and if the Red Cross can, by cutting out its appropriation, gain for its humanitarian work of a directly practical nature, the emergency is too great to try to force this issue.

Centenarian. Mrs. Antoinette Smith of Springfield, Ill., celebrated her 106th birthday late in May. She was born in the Madeira Islands, has 5 children living, the oldest aged 80, and other descendants down to a great great grandchild.

Military Mortality. The total deaths among British army surgeons, from the beginning of the war to Jan. 1, are said to have been only 782. The present medical staff numbers about 14,000, but, of these 1200 are Canadians and there are

also—or rather were at that date, a small percentage of Americans, the proportion having been considerably increased recently. A fair basis for computing death rate, is 12,000. The death rate therefore corresponds to scarcely 2% per annum, which is about the normal for physicians of all ages though necessarily greater than for the profession excluding those of advanced years. The total death rate from disease has been about 4%, or a trifle over 1% per annum, as against 67% for the period of the Napoleonic wars. Deaths from military causes are not stated but it is said that 2% of those exposed to gas have died and that shell shock, which American authorities are inclined to consider neurotic, has caused a fraction of a per cent. of deaths.

The Chautauqua Co. Tuberculosis Hospital, for which Mrs. Elizabeth M. Newton of Fredonia left \$150,000, is being erected on the south shore of Cassadaga Lake, work being rushed to accommodate incipient cases among soldiers. It may be remarked that the alarm as to tuberculosis in the army is unfounded. While approximately 10% of the total mortality of any average community has been due to tuberculosis for many years, only about 1% of soldiers are found to be affected with active lesions, the diagnosis being most searching and detecting cases that would be passed over in civilian life. With remarkably few exceptions, the cases are detected early enough to assure a permanent cure if due care is assured. Indeed, the soldiers are retained long enough to give them a rest and abundant nourishment and to train them in personal hygiene. If the home community will take up the work where the Army leaves off, instead of alarm, we should congratulate ourselves on the ultimate life saving value of mobilization under modern conditions.

The National Committee for Mental Hygiene announced the establishment of a war emergency course at Smith College, Northampton, Mass., to prepare workers to assist in the reclaiming of soldiers suffering from nervous and mental diseases, including war neuroses and the so-called shell shock.

The prevalence of mental and nervous disorders is unprecedented in the present war, and all of the allied nations have had to provide extensive facilities for dealing with these cases. Many of the disorders yield readily to treatment, which requires the use of civilian aides as well as medical specialists to restore the men to mental soundness and to enable them to adjust themselves again to civil or military life.

The course will be conducted by Smith College and by the Boston Psychopathic Hospital under the auspices of The National Committee for Mental Hygiene, through a subcommittee composed of Dr. E. E. Southard of Boston, Chairman; Dr. William L. Russell and Dr. L. Pierce Clark of New York; Dr. Walter E. Fernald of Waverly, Mass., and William A. Neilson, Ph. D., President of Smith College.

The course will cover eight months, and will be open to college graduates and other young women who have had an equivalent technical training. The academic instruction will be given at Smith College from July 8 to August 31, to be followed by six months' practice work to be given at various centers where there are opportunities for social work with psychiatric cases under the direction of trained social workers. The major studies in the course will be sociology including methods of social case work, psychology and social psychiatry. Minor studies will include hygiene, occupational therapy, military usage, and the writing of records and reports.

Refuse to Recognize Medical Sects for Military Purposes. The Surgeon General has declined to endorse a movement to recognize various medical sects as such though, as a matter of policy and of fact; competent medical men are eligible to appointment in the various medical corps, irrespective of school of graduation and due regard is shown to individual opinions in therapeutics after appointment. It may be remembered that the same problem was put before President Lincoln, in a limited form, and effectually disposed of by one of his epigrams.

Mail written and mailed by soldiers, sailors and marines assigned to duty in a foreign country, engaged in the present war, is sent postage free.

Blood Groups. Untoward results are due to agglutination of the donor's blood by the recipient's. The reactions are shown by the following semi-diagrammatic scheme, arrows showing the direction in which blood may be donated. Donation of blood must never be made against the direction of the arrows. (Note that the double headed arrow in the diagonal between 2 and 3 represents mutual danger). Any group may receive blood safely from its own group. If, as in emergencies, transfusion is practiced without examination of groups, 10% (Group 1) would have 100% of safety; 40% (Group 2) would have 83% of safety; 7% (Group 3) would have 50% of safety; 43% would have 43% of safety: Aggregate safety 65.19%.

SOCIETY MEETINGS

Brief reports and announcements of meetings of societies of Western New York, and those of general scope, are requested from Secretaries. Copy should be on hand the fifteenth of the month. Full transactions will be published at cost of composition.

The **Buffalo Academy of Medicine** has elected the following officers for 1918-1919: President, Dr. F. Park Lewis; Secretary, Dr. James B. Cross; Treasurer, Dr. Bernard Schreiner.

Buffalo Academy of Medicine; Meeting May 22nd. Program: Water Purification and Disease by James M. Caird, A. S. C. E., Troy.

Elmira Academy of Medicine and The Chemung Co. Medical Society held a joint meeting on June 5th. Dr. W. A. Dewitt of Blossburg, Pa., gave a paper on "Fee Schedule to be Discussed."

The Medical Department of the **University of Buffalo** held its 43rd Annual Meeting, June 5, 6 and 7th at the College. Papers were read by the following physicians: "The Alkaloidal Derivatives of Ipecac in Therapeutics" by Dr. Edward W. Koch, Buffalo; "Pneumonia and Pneumococcic Differentiation" by Dr. A. M. Zillig, Buffalo; "Demonstration of the Colloidal Gold Reaction" by Dr. A. E. Zielinski, Buffalo; "The Medical Department of the U. S. Army in Relation to the War" by Dr. Thos. B. Woodson, Buffalo; "The Clinical Results of Tissue Transplantation" by Dr. Allen B. Kanavel, Chicago, Ill.; "X-ray Diagnosis of Diseases of the Heart and Aorta" by Dr. I. H. Levy, Syracuse; "The Internal Ear and Brain Localization from the Viewpoint of the General Practitioner" by Dr. Lewis Fisher, Philadelphia; "The Influence of the War upon the Public Health Problem" by Dr. Chas. Hastings, Toronto; "The Newer Aspects of the Pneumonia Problem" by Dr. Alexander McPhedran, Toronto; and "Psycho Neuroses and the War with Clinical Demonstration" by Dr. Smith E. Jelliffe, New York City.

Our Friends the Feeble-minded.

The recent meeting here at Buffalo, of the American Association for the Study of the Feeble-minded—May 31st and June 1st—had an importance quite out of proportion to the size of the association itself or the degree of attention which it attracted from the medical profession. Of the more technical aspects of the program this review will perforce

have little to say, especially as the variety of that program and its new orientations were of more significance than even the ablest paper presented by the brilliant group of experts who were in attendance. The association was originally for the Care and Study of the Feeble-minded, and its members predominantly superintendents of institutions for mental defectives or the insane. The problem as seen was a static one; the custodial idea was in control. But on the program of the meeting just concluded it had scant recognition; instead, extra-institutional care in various phases, industrial training and the relation of the schools to backward and degenerate children were to the fore, as well as papers dealing with the causes and prevention of feeble-mindedness. We have come to see that the question is dynamic to a high degree, with far-reaching ramifications. The relation of mental defect to poverty and to crime is so well established, its by-products so menacing, and the question of what to do about it so urgent.

A year and a half ago Erie County had filled its quota of places in public institutions for such cases, and something more, had sixty-four inmates in the Brunswick Home on Long Island, at about double the per capita cost in state institutions, and a waiting list of at least sixty-five. This list contained merely certain of the more marked cases, in which our county agents had been able to overcome legal difficulties and family objections, and in no degree measured the strength of our reserves in citizens of that quality. What their numbers are we do not know today, but in the spring of 1917 a letter was sent from the office of the Superintendent of the Poor to each school in the county outside of the city of Buffalo, asking whether there were defective children in that school. The inquiry revealed about 585 such children. An accepted estimate of the proportion of defectives to the population is two per cent.

As a first step toward meeting this situation, last spring a colony for feeble-minded boys was started at Akron by Dr. Bernstein of the Custodial Asylum at Rome. A building which had had a brief life as a sanitarium was rented with some sixty acres of ground, and a Roman cohort, under the charge of an excellent Scotch couple, took possession. "We move in," said Dr. Bernstein, "as the United States army does," and all honor is due to the woman who led that advance guard, and under whose hand that building, with the accumulated dust and dilapidation of seven years of disuse, grew into pleasantness and comfort. From the farmer's point of view it was a late beginning, and the season was bad. But the twenty boys there last summer nevertheless

raised the winter vegetables needed by the colony and had "the best field of cabbage in Erie County." A number of the boys also found employment in the town, taking care of lawns and gardens, and with neighboring farmers. They have earned, up to date, \$2,059.00. Ninety additional acres have now been rented, to be devoted to truck farming, and a second home has been opened, bringing the available accommodations up to forty. This second house is also a school, where the boys have daily lessons in such branches as they can master. Plans are also under way for one or two colonies of women in other towns of the county. Those women will do laundry work and cleaning, and a few of them can sew acceptably. No one will question that their labor will be in demand. These colonies, whose ultimate success must be held **subjudice**, accomplish certain definite things. If the feeble-minded—like the rest of us—are to be kept out of mischief, they must be kept busy. In time, an institution comes to have a greater supply of certain kinds of labor than it can utilize; if some of these workers swarm successfully from the mother hive, place is made for just so many on the waiting list who sorely need institutional care. The community gains labor to which it is entitled, and at least a measure of the support of these dependents is lifted from its shoulders. "Why lock up that labor," asks Dr. Bernstein pertinently, "and then get in a lot more just like it through Ellis Island to fill the gap?" Moreover, the defective himself is brought by so much nearer to normal social relations. Such colonies, as a step toward "The Rehabilitation of the Mentally Defective"—"Dr. Bernstein's paper at the recent meeting—are laboratories in which a human product is being tested, and their experience should be studied with sympathetic attention and the open mind.

Those who attended these meetings will remember the statements of Dr. H. H. Goddard that no normal child should be institutionalized and every abnormal one should be, and that the state of mind in which the normal person faces work requiring trained skill is the condition of the defective in regard to the simplest job. But each, in his own measure, can be taught, and it may prove that a considerable proportion of the mentally defective, after the institution has trained them in some routine occupation and developed in them certain habits of conduct, can be safely returned to a measure of community life. It may even prove that certain of the high-grade defectives need less than that degree of institutionalizing. It was with this question in mind that the Vassar Club arranged a preliminary meeting, on the evening of May 30, for the discussion of the industrial training and

after-control which would best fit mental defectives for extra-institutional life, hoping to focus the discussion especially on our local conditions. The club, which published, a year ago, a brief report on mental defectives here at Buffalo, is attempting an investigation of the records of pupils in our special classes for defectives who remained until the age of sixteen and were then set free, after the custom of the day, without a trade and without supervision, to go where they would. If this inquiry reveals, as the first data seems to indicate, that even under these conditions a fair proportion show industrial capacity, the duty of the community to such boys and girls is pretty clear. In his paper, Dr. George E. Smith, of our Dept. of Education, dealt with this subject in its wider phases—the just claims upon us, for training suited to their needs, of the mental defective and his near-kin, the backward child. The possibilities latent in the latter class are one of the encouraging features of the situation. In a recent survey of the school population in the Locust Point district of Baltimore—a slum district—"the subnormal children were grouped according to their prospective adult efficiency into three groups, those who could never be independent, those of almost certain partial dependency, those of merely possible dependency," and "a consecutive series of fifty cases of backward children between the ages of fourteen and sixteen years, who applied for a special permit to work, was studied for two years; these children had not passed the fifth grade, otherwise they would have been entitled to a permit. The average wage of these children at the end of two years was \$6 a week; this no doubt may have been due to unusually favorable labor conditions."

"As to the mental level of the children, thirteen had a mental age of nine years when they applied for a permit in 1914, i.e., they were at least "five years retarded." But two of these children, then "five years retarded," are at present attending night school; one of them is making \$7 a week as a factory worker, the other is making \$8 a week as a huckster."

Such facts as these, together with the established teachableness, within certain limits, of the moron of good temperamental qualities, indicate quite definitely the directions in which we should advance our treatment of the laggard child. Nowhere are the rules of thumb less to be trusted than in estimating the intelligence of such a child; "they are apt to leave us in the lurch when we most require them, when we would like to have some means of determining whether the individual child will be able later to become an independent, self-supporting worker.—What "mental level" must be at-

tained if the individual is to be self-supporting?—Is it the same for urban and country life, for North and South? asks Dr. Macfie Campbell, from whom we have been quoting. Is it indeed true that the man whom Massachusetts rejects as feeble-minded may become a leading citizen in Oklahoma?

*Mental Hygiene, April, 1918, pg. 235.

One of the outstanding features of the meeting was the marked differences of opinion which were elicited. This means a new field, the laboratory spirit, and the challenge of experts at every step in unravelling its problems, which go deep into the fabric of our social organization and government.

In solving those problems Buffalo can do its full share. We have able leaders, a devoted body of trained workers, and constantly widening public support. Nor do we lack material. How many of us there are is still a matter of surmise; but the rumors from army examining boards are not flattering, and it is seriously proposed to recognize a new mental grade, between the moron and the normal man—the “simples”—in confident expectation that an ample proportion of one’s fellow-citizens will qualify under it. But the question of numbers will soon be settled. The Sage bill, passed this year, established a State Commission on the Feeble-minded, which provides, among other measures, for a census of the feeble-minded in the State, under a sweeping definition of mental deficiency—“any person afflicted with mental defectiveness from birth or from an early age, to such an extent that he is incapable of managing himself and his affairs, or of being taught to do so, who for his own welfare and the welfare of others, or for the welfare of the community, requires supervision, control or care, and who is not insane or of unsound mind to such an extent as to require his commitment to an institution for the insane as provided by the insanity law.” The commission is to consist of three members, a physician, the fiscal supervisor of state charities, and the secretary of the State Board of Charities. Among other duties, they are to prepare a general commitment law, and provide clinics, colonies and necessary institutional accommodations. All feeble-minded persons in the state are to be recorded. The Commission may commandeer the services of any state agency, the Dept. of Education being specifically mentioned.

It is a great step forward, but if the problems of that wide and tangled field are to be cleared up, there must be the full co-operation of the medical profession as well.

—ELIZABETH M. HOWE.

The American Academy of Ophthalmology and Oto-

Laryngology will hold its 23d annual meeting at Denver, Aug. 5-7. Dr. Lee Masten Francis of Buffalo is the Secretary.

The regular meeting of the **Medical Society of the County of Erie** was held on Monday, June 17th, at 9 p. m., in the Buffalo Medical College.

In the absence of President Cott, 1st Vice-President James E. King presided.

The Secretary read the minutes of the regular meeting held April 15th, also the meeting of the Council held May 13th, and meeting of the Council held June 17th, which were approved as read.

Dr. Jacobs, Chairman of the Committee on Membership presented the names of Dr. George W. Schaefer, 967 Jefferson Street, for re-election to the Society. Dr. Schaefer having resigned at the time he left Buffalo, and also Dr. Guy L. McCutcheon, 520 Potomac Avenue, Buffalo, for re-instatement. The Membership Committee recommended their re-election and re-instatement.

On motion the Secretary was instructed to cast the ballot of the Society for the re-election and re-instatement of these men.

Reports of committees being called for Dr. Woodruff presented a verbal report of part of the work done by the Delegates to the State Society. He also reported briefly for the Committee, relative to Medical Fees.

Dr. Lytle made a brief verbal report for the Committee on the Home for Feeble-minded at Akron, all of which were accepted.

Dr. Lytle stated that under the by-laws the Treasurer is required to report the names of all those who are in arrears with their dues at this meeting. On motion the reading of these names was dispensed with.

The Secretary called attention to the resolution adopted by the Council, relative to the payment of State and County dues of members who are in the Federal service, and also called attention to the action taken by the State Society, regarding this question.

On motion of Dr. Gram it was resolved that the question of remission of State and County dues of all such members who are in arrears on December 31st, 1918, by reason of the fact that they are in the Federal service be left to the Council with power. The motion was adopted.

Dr. Lytle, President of the 8th District Branch, stated that although the last meeting of this Branch was held in Buffalo in 1917, the members were inclined to return to Buffalo

for their 1918 meeting, on account of the better facilities offered both for reaching the city and for holding meetings.

On motion of Dr. Gram the 8th District Branch was invited to hold its next meeting in Buffalo in September.

Moved by Dr. H. H. Glosser that it is the sense of this meeting that physicians of Buffalo should live up to the State Law and City Ordinance and report all Venereal Diseases coming to their notice. The motion was adopted.

The paper of the evening was then presented by Dr. Walter S. Goodale, Superintendent of Hospitals and Dispensaries on the subject of "The Control of the Venereal Infection."

This paper was discussed generally by members present and heartily recommended by every speaker.

The meeting then adjourned.

FRANKLIN C. GRAM, M. D.,
Secretary.

PERSONAL

Announcement of removal, travel, and other matters of interest are requested. Please report errors in the listing of any physician in the State and other directories, that we may co-operate with the State Society in securing a correct list.

Dr. Arthur W. Hurd, for many years Superintendent of the Buffalo State Hospital for the Insane, has resigned and will reside in California.

Dr. Frank W. Ross of Elmira is sick with pneumonia.

Dr. Clarence A. Hill of Buffalo announces the removal of his office to 107 Anderson Pl. He will specialize in anesthesia.

Dr. S. S. Green of Buffalo has returned from Florida and has moved from Niagara St. to 349 Front Ave.

Dr. Lee Masten Francis of Buffalo is to enter the government service as a member of the staff of the hospital for head injuries. The hospital will have from 2,500 to 3,000 beds. The base will be in France.

Dr. Stephen A. Brown of Westfield who was shot in the jaw by Joseph Johnson is now in the Brooks Memorial Hospital and is doing nicely.

Capt. H. B. Huver of Buffalo and Williamsville is attached to a hospital in France, assigned to special service along lines of oral and plastic facial surgery.

Dr. F. B. Willard of Buffalo has moved his office to 317 Richmond Ave.

Dr. Julius Ullman of Buffalo has returned from a visit to Chicago.

MILITARY PERSONALS

Lt. Arthur S. Bugbee of Medina is reported wounded in action.

To Camp Gordon, Atlanta, Ga.; Lieut. Edwin C. Foster, Penn Yan.

To Camp Greene, Charlotte, N. C.; Capt. Edward Dowdle, Oswego.

To Camp Wheeler, Macon, Ga.; Capt. Frederick W. Lester, Seneca Falls.

To Camp Hancock, Augusta, Ga.; Major Isaac W. Brewer, Geneva.

To Camp Meade, Md.; Major Ross Chapman, Binghamton.

To Camp Upton, N. Y.; Lieut. John H. Watson, Buffalo.

To Fort Logan, Col.; Capt. Noah P. Norman, Watkins.

To Fort McHenry, Md.; Lieut. F. P. Schenkelberger, Gowanda.

To Fort Oglethorpe, Ga.; Lieuts. Raymond G. Bell, Auburn; Harold Johnson, Buffalo; G. C. Barone, Lockport; Thomas M. Calladine, Perry; Chas. C. Teresi, Rochester; Albert R. Ellison, Spencer; Urban A. Fischer, Buffalo.

To Fort Wayne, Mich.; Lieut. Leon S. Kurek, Buffalo.

To Rochester, Minn.; Lieut. Roy J. Marshall, Rome.

To Washington, D. C.; Capts. Herman L. Raymond, Collins; Wm. R. Woodbury, Rochester.

To Camp Lee, Va.; Lieut. Ray Woodward, Lackawanna.

To Camp Pike, Ark.; Lieut. Judson J. Wilson, Ithaca.

To Camp Sevier, S. C.; Lieuts. Henry M. Spofford, Batavia; John C. Desloch, Rochester.

To Edgewood, Md.; Capt. Frederick W. Filsinger, Buffalo.

To Camp Jackson, Columbia, S. C.; Carl Tompkins, Buffalo.

To Fort Sam Houston, Texas; Capt. James C. Davis, Rochester.

To Rockefeller Institute; Lieuts. Frederick W. Palmer, Buffalo; Louis S. Kelley, Newark.

OBITUARY

Readers are requested to report promptly the death of all physicians in Western New York, or former residents of this region, or graduates of any medical school in Western New York, and to notify the families of the deceased of our desire to publish adequate Obituary notices.

Dr. John F. Cleveland, Le Roy, Bellevue Hospital Medical College, New York, 1865. Died April 16, age 86. He was a veteran of the Civil War.

Dr. William J. Hennessy of Palmyra died April 27, age 61. He graduated from the Syracuse University Medical College in 1881.

Dr. Richard L. Stoddard of Rochester died April 29, age 48. He graduated from the Albany Medical College in 1895.

Dr. Frederick H. Parker of Auburn died recently, age 62. He graduated from the New York University, Medical Department, in 1881.

Dr. George B. McCollum of Buffalo died May 19, age 63. (Not listed in the N. Y. State Med. Directory).

Dr. Isaac T. Mullen died in Chicago May 10th. He had lived formerly in Oakfield, N. Y.

Dr. Seymour C. Williamson died in Canisteo May 21, age 80. He graduated from the Baltimore College in 1885.

ABSTRACTS

Intrabronchial Foreign Body. D. Denechau, *Le Prog. Med.*, Dec. 29, 1917, reports the case of a woman who accidentally swallowed a bit of celluloid from a collar stiffener. Dyspnoea, cough and signs of bronchitis developed, the picture becoming that of pulmonary tuberculosis with emphysema. The foreign body was finally spontaneously ejected in a coughing fit 2 years less three days from the time it was swallowed. Comby, in the discussion, mentioned an analogous case in which the foreign body was not coughed up for more than 20 years.

Glycosuria in War Traumatisms. F. Rathery, *Le Prog. Med.*, Oct. 27, 1917, found 60 cases in 1,412 wounded (4.17%). It was more frequent in cases of multiple wounds, amounted to 2-20, rarely 30 grams of sugar a day, usually lasted only 2-3 days but in one case 15 days and in another several months. It never amounted to a true diabetes.

Renal Paratyphoid. A. Gouget, *Le Prog. Med.*, Dec. 22, 1917, reports a man who, at the age of 19, had an acute nephritis, and at the age of 22, suffered a paratyphoid infection absolutely or, at least, predominantly, involving the kidneys. The only point in doubt was whether the albuminuria and the renal lesion itself had actually persisted from the time of the acute nephritis.

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ABSTRACTS.

Projectile Lodged Beside Aorta. Laurent of Brussels, Le Prog. Med., Dec. 22, 1917, reports a fragment of the envelope of a bullet lodged along the descending aorta. The ribs were raised from the lung and diaphragm and at the depth of 12 c.m., a sort of whirlpool was found, due to the action of the lung and the beating of the aorta, within which the foreign body was located. It was removed through the posterior mediastinum. Recovery.

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Articles should not be descriptive of therapeutic effects but limited to actual experiences which demonstrate the fact of Neurosine's safety. Commendations are not desired. Names of authors will be omitted on request. Papers must be received not later than July 31st.

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ABSTRACT.

Kernig's Sign in Typhoid Septicaemia. V. Audibert, Marseille Med., claims that this occurs in about half the cases of typhoid, rarely being absent in grave cases and occasionally present in mild ones. The term septicaemia does not appear to be used in any distinguishing sense. The sign is present from the beginning. It is often but not necessarily accompanied by hypertension of the cerebro-spinal fluid and is explained by the irritation of the cerebro-spinal motor system by the typhoid toxins.

Commercial Javel Water in Infected Wounds. Cazin and Miss Krongold, Le Prog. Med., Nov. 24, 1917, have treated 510 cases, including 155 compound fractures, with 3 deaths, one due to tetanus and one to icterus gravis. Only two amputations were performed and both on account of the extent of the lesions, not on account of sepsis. A strength of 15:1000 was employed. They consider the solution superior to Dakin's.

Ureteral Calculus. Pousson, Le Prog. Med., Dec. 15, 1917, successfully removed from the ureter a calculus 3x2.5 c.m.

Apothesine: Suggestions for Use.

This product is applicable in any procedure in which a local anesthetic is indicated. It is supplied in hypodermic-tablet form. The strength of solution (in water or physiologic salt solution), and the quantity to be injected, should be determined by circumstances. Solutions generally used range in strength from 0.5 to 3 per cent., the weaker solutions when the anesthetic is to be applied to rather extended areas. The strength of solution generally preferred in surgical operations is 1 per cent. In dental work the 2-per-cent solution is usually employed. Solutions of Apothesine act more slowly than those of cocaine, hence more time should be allowed for them to produce the required degree of anesthesia.

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ABSTRACTS

Digestibility of the Dasheen. C. F. Langworthy and A. D. Holmes, Bull. 612, U. S. Dept. of Agriculture. This is the *colocasia esculenta*, occurring in several varieties, including the taro of the Hawaiians. Beside being cooked in the form of a paste (poi) familiar in Hawaiian postal cards, it is used like the potato and sweet potato. It consists, for each plant, of a large central underground stem weighing 1-6 pounds and several smaller tubers (?). It contains about 70% water, 2 of protein, 1-2 per mille of fat and 30% of carbohydrate. It is practically equivalent to the sweet potato and about 50% richer in carbohydrate than the Irish potato. Included with milk, fruit and butter, a number of experiments showed that 68-90% of protein were assimilated (deducting faecal contents), 94-97% of fat and 64-90% of carbohydrate. It is, of course, difficult to state just what percentage of the dasheen nutritives were assimilated, and the fact that carbohydrate may be destroyed by fermentation without leaving faecal residue, does not receive attention. The most amazing thing about the experiments is the high utilization of fats (though to a less degree, subject to the same criticism) which of course, were practically independent of the dasheen which contains them in appreciable quantities. The fat ranged from 230 to 540 grams, one ration including over a pound of butter alone. We did not suppose that any human being could ingest so large a quantity in a day without serious disturbance of assimilation, even if acidosis did not develop.

Measurement of Spinal Puncture Needle. A. Levinson, Chicago, Jour. of Lab. and Clin. Med., Nov. 1917. The author quotes Quincke's rather small table of measurements and a considerable series of personal measurements of the depth from the surface of the skin required to get a good flow. While these showed marked differences, especially in older persons, due to differences in fat, he lays down the following approximate guides: Under 1 year, 2-2.5 c.m.; 1-2 years, 2-3.5; 2-4 years, 2-4 c.m.; 4-7 years, 2.8-4; 7-12 years, 3.2-4; after 16 years, 4.1-10 c.m., the usual range being 4.5-5.8 c.m.

Treatment of Psoriasis by Injections of Sulphur in Oil. Louis Bory, Le Prog. Med., Nov. 17, 1917, injects 4-8 c.c. of an oily "solution," of which the details are not given, every 5-8 days, and claims good results. He compares the solutions to those of mercury, arsenic and potassium iodid.

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Metabolism in Tetany. A number of authors contribute a symposium to the Quart. Jour. of Experimental Path., 1917. Experimental and probably idiopathic tetany is due to removal or failure, respectively, of the Parathyroids. Occasional inconsistencies in experiments is explained by the presence of supplementary parathyroids in 50% of cats and 5% of dogs. The spasticity and tremors are regarded not as cerebral but as due to unopposed cerebellar action. The integrity of the spinal arc is not essential as the symptoms persist after section of the dorsal roots of spinal nerves. There is a marked increase in the electric response of peripheral motor nerves. From the standpoint of metabolism, the thyroids and parathyroids are independent and tetany seems to be connected especially—probably entirely—with increase of guanidin and methyl-guanidin. Expressing both in terms of the former in milligrams per 1000 c.c., the normal for dogs is 1 in the blood and 0.25 in the urine, increased by parathyroidectomy to 8.7 and 1.1 respectively. Children with active tetany showed an average of 0.58 in the urine of active cases; 0.38 in latent; 0.12 in convalescence. The function of the parathyroids is to regulate muscular tone through control of guanidin. Parathyroidectomy and idiopathic cases are identical in manifestations and metabolism and probably in essential pathogenesis.

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ABSTRACTS.

Selection of Donors of Blood for Transfusion. Roger I. Lee, Brit. Med. Jour., Nov. 24, 1917, emphasizes the importance of the recognition of the 4 groups of Moss, as the indiscriminate transfusion of blood may result in the introduction of an essentially foreign albumin whose effects vary from a mild indisposition to sudden death, not to mention that the unwise selection of a donor may defeat the object of the transfusion by producing haemolysis. Group 1 (about 8% of the total) has the following characteristics: The serum does not agglutinate the globules of any group but the globules are agglutinated by the serum of all other groups. Group 2 (40%): The serum agglutinates the globules of groups 1 and 3 and the globules are agglutinated by the serum of groups 3 and 4. Group 3 (10%): The serum agglutinates the globules of groups 1 and 2 and the globules are agglutinated by the serum of groups 2 and 4. Group 4 (42%): The serum agglutinates the globules of groups 1, 2 and 3. The globules are not agglutinated by any serum. Individuals of group 1 are obviously receptors from any source and, conversely, those of group 4 are universal donors. It is implied, however, that if time is allowed, it is better to use an individual as donor from the same group as the receptor. The small number of individuals of group 1 is, by the law of chance, an unfavorable element. A number of available donors are listed in advance, representing groups 2, 3 and 4, the chance of both donor and receptor being in group 1 being only 8% of 8%. If the case is not urgent, the group of the receptor is determined and homologous blood is transfused. In an urgent case, any individual may receive blood from group 4, the most common of all.

Alcohol in the Cerebro-Spinal Fluid. E. Lenoble and F. Daniel state that the amount of alcohol which can be determined in the fluid is proportionate to the intensity of the intoxication, is gradually eliminated in a period of 8-13 days, on the average 10. The proportionate amount corresponds approximately to that in the urine but the relative amount in the cerebro-spinal fluid is greater. While alcohol might be added to the urine accidentally or to confuse the diagnosis or easily introduced by catheter, any falsification of the actual condition would be practically impossible so far as the cerebro-spinal fluid is concerned and the withdrawal of a specimen, even post mortem, might have great medico-legal importance.

Condition of Servian Refugees in France. Petrovitch, Le Prog. Med., Dec. 22, 1917, state that the exposure has resulted in most of the refugees having had typhus, typhoid and cholera and that a large number are now afflicted with tuberculosis.

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Carbon Dioxide (set free from bicarbonates on boiling).....	44.48
Hydrogen Sulphide	None
Salts in Solution in Parts per Million:	
Si O ₂ (Silica)	14.06
S O ₄ (Sulphuric acid radicle)....	8.42
H C O ₃ (Bicarbonate acid radicle).242.20	
P O ₄ (Phosphoric acid radicle)..	.27
Cl (Chlorine)	4.00
Fe (Iron)	1.40
Ca (Calcium)	69.14
Mg (Magnesium)	7.90
K (Potassium)	1.42
Na (Sodium)	3.25
Li, Br. (I, Mn.)	Traces
O Oxygen to combine with Fe and Mn to form oxides and with part of the Si O ₂ to form Ca Si O ₃	.80
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ABSTRACTS

Hydatid Cyst of Right Auricle. Sudden Death. Moncini, *Giornale di Med. e Chir.*, quoted in *Le Moniteur Med.*, Feb. 8, 1918, cites the case of a soldier who died suddenly on attempting to board a train. Up to this time, he had manifested no symptoms, had withstood the strain of military life well, and he was only 29. Necropsy revealed a hydatid cyst larger than an orange, attached to and ruptured into the right auricle, with consecutive pulmonary infarctions (sic).

Idiopathic Cerebral Abscess, Opening Spontaneously Into the Cerebro-Spinal Cavity. Cristan and Damany, *Arch. de Med. et Pharm. Navales, Mch.* 1917. A sailor, with high temperature and convulsion somewhat resembling epilepsy and not presenting the typic picture of either meningococcus or tuberculous meningitis, yielded 20-30 c.c. of creamy liquid. Some recurrences followed but it is implied that recovery eventually took place. Cutaneous tuberculin reaction and Wassermann test negative. The diagnosis as stated, does not seem to rest upon other than circumstantial evidence but the authors claim to have had identical cases in the past and the possibility of such an occurrence is worth noting.

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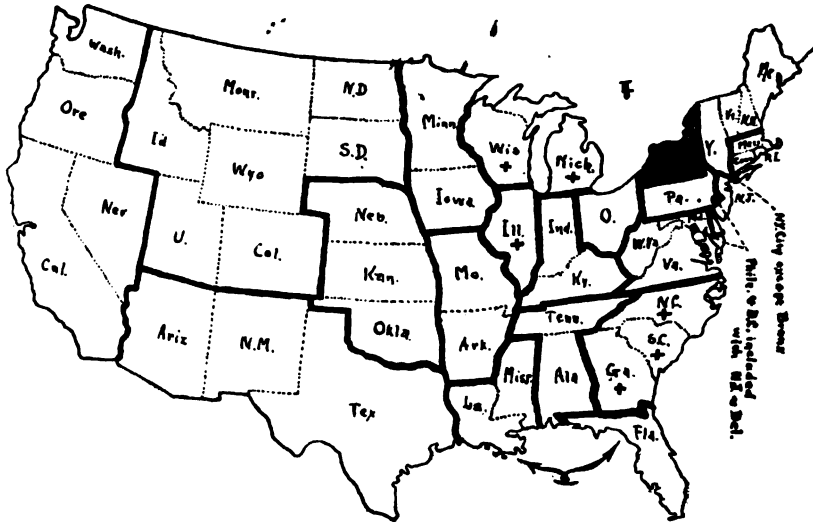
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Abstracts

Penetration of Eye Lashes Into the Anterior Chamber of the Eye. A Cantonnet, *Le Prog. Med.*, Nov. 24, 1917, alludes to the frequency of foreign bodies in the anterior chamber in the present war. The most common are minute fragments of stone, next bits of metal from projectiles, fragments of glass, wood, etc. Rare, but extremely interesting are the cases in which lashes are forced into the anterior chamber. Usually, 2 or 3 are present but the number observed has ranged from 1 to 6. Aside from the photophobia, the diagnosis is easy if one is careful to examine with oblique illumination and to use a magnifying glass. Extraction is not usually difficult and the prognosis is good if the case is promptly treated, though, of course, the case may be complicated with more serious lesions. If allowed to remain in situ for some time, the epithelium of the anterior surface of the iris proliferates and minute bullae form either on this surface or in the angle of the anterior chamber—the so-called serous cysts of the iris.

Itch. A surprising increase in the prevalence of this affection is noted by Thibierge (*Le Prog. Med.*, Dec. 22, 1917), and accounted for by hygienic conditions due to war.

Abstracts

Leishmaniosis. Neiva and Barbara, quoted in *Le Moniteur Med.*, Feb. 8, 1918, state that this disease is common in S. America. They have followed at Buenos Ayres, the method of Vianna of Brazil, consisting in intravenous injections of tartar emetic, 1 pro mille up to 1% in 0.85 pro % salt solution, sterilized by passing through the Berkefeld or Chamberland filter, never by heat. Injections corresponding to 10 c.g. of tartar emetic are given every day or alternate days and up to 100 doses may be given.

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Abstracts.

Typhoid Form of Oriental Spirochetosis. Manine and Cristau, *Le Prog. Med.*, Nov. 24, 1917, have observed 10 cases, 3 of which had received triple typhoid vaccine previously. Of the 7 non-vaccinated cases, 3 were complications of spirochetosis with typhoid or paratyphoid, each augmenting the severity of the other, two being very severe and one fatal. The 4 other non-vaccinated cases and, of course, the 3 vaccinated, were pure spirochetoses. In the latter, the agglutinating power of the serum was markedly but transiently increased. All presented congestive or haemorrhagic phenomena but none icterus. Urotropine and adrenalin were employed.

Meningococcic Epididymitis. R. Lancelin, *Le Prog. Med.*, Nov. 24, 1917, reports three cases, all occurring in meningitis and none having gonorrhoea. All recovered.

Sabouraud's Molar Sign of Hereditary Syphilis. G. Raillet, *Le Prog. Med.*, Dec. 29, 1917, cites his experience that the mamillary eminence on the internal aspect of the upper first molars is solely due to hereditary syphilis. He concedes that it is essentially a dystrophy and that it may be due to chronic intoxications and infections of the parents in general but believes that these are, for the most part, due to syphilis.

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